1: **Gillin** SR 9 Carib SR 9

256

[For starch made from cassava, see 252.]

1: Gillin SR 9 Carib SR 9

574

[See also 527 in which visiting and hospitality are considered part of the typical Carib Spree.)

1: Gillin E-5 (1932-33) 1936 SR9 Carib SR9

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THE BARAMA RIVER CARIBS OF BRITISH GUIANA

BY

JOHN GILLIN

THIRTY PLATES AND
THIRTEEN ILLUSTRATIONS IN THE TEXT

CAMBRIDGE, MASSACHUSETTS, U.S.A.
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1936

TO

SIR EDWARD BRANDEIS DENHAM, K.B.E., G.C.M.G.

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INTRODUCTION

THE original scope of the present study was to gather and interpret data on the social organization and the physical anthropology of the Barama River Caribs of British Guiana. The late Dr. Walter E. Roth, whose death in March, 1933, ended a long and distinguished career as an ethnological investigator both in Australia and in British Guiana, had devoted a period of more than thirty years to a study of the Guiana Indians. Dr. Roth's interests lay most strongly within the fields of material culture. It was felt that his compendious publications (see bibliography) on these aspects of Guiana Indian life left little to be done in that field with the time which could be devoted to the present research. Dr. Roth combined an exhaustive sifting of the literature with the results of his own extensive inquiries carried on in various parts of the colony. He also made valuable contributions to our knowledge of the religion and folklore of the various tribes of the Guianas. 121 114

Since the sixteenth century a series of explorers, missionaries, and occasional scientists have published interesting data on the Indians of the Guianas and associated tribes. The problem of the Harvard expedition therefore was twofold: first, to select a tribe which had hitherto been neglected; second, to choose those aspects of primitive life which, on the basis of an examination of the earlier literature, had received scant attention in the past. It was apparent that two tribes which had been most neglected were the Waiwais living at the head of the Essequibo River, and the Caribs of the Barama River in the Northwest District. For financial reasons the latter were chosen.

Only two small anthropometric series had hitherto been collected in the colony. Also it became apparent that there was in existence no sociological analysis of a primitive culture in this area. Physical anthropology and sociology were consequently chosen as the logical fields for research. It was not considered advisable, however, to limit activities strictly to these two fields, to shut them off arbitrarily from other aspects of the native life. It will be seen in the following pages, therefore, that an attempt has been made to present the whole culture, but that detailed description and

121
114
analysis have been in the main reserved for those features most intimately connected with the social organization.

124
Cultural data were acquired in interviews conducted by the "free association" method, with no preconceived organization imposed upon informants. Conversation was struck up with Indians wherever they were met, on the river in their canoes, around the camp fire at night, in their houses during drinking sprees, anywhere and everywhere. In these informal chats, a note-book was seldom used, but the interviewer retired directly following the conversation and made notes. Informants were frequently recalled to supplement information after the notes had been set down. In this way, without ostensibly directing the discussion or suggesting attitudes or facts, I was able to acquire a familiarity with usages and concepts which could be checked against each other independently. Having thus "blocked out" a certain department of culture, I then proceeded to a series of formal interviews with sober informants to clear up obscurities and further to check accuracy. In the text I have indicated those points concerning which there was important difference of opinion or on which I was able to obtain only unchecked information. Of the information which I have set down, therefore, I am either reasonably certain or have indicated otherwise.

121
114
It is to be regretted that documentary and archeological data concerning the Barama Caribs do not extend back more than approximately a century, so that it is not possible to view the present culture in the light of a long historic background. However, such historical material as is available for this tribe is presented wherever it is relevant to a more complete understanding of the present culture. On the other hand, this study makes no pretense to elaborate historical reconstruction. The purpose of the ethnological portion of this paper is to present Carib culture as it was in the years 1932–1933 and to attempt to understand the fundamental workings of that culture. The author hopes at some future date to complete a thoroughgoing ethnographic comparison of the culture of the Barama Caribs with those reported from other groups in the area.

* * * * * *

123
The investigator spent a total of seven months in the colony.

Of this period one hundred and seventy-four days, or slightly less 123
than six months, were spent in the interior with the Indians themselves. It is my belief that no ethnologist can say with authority that he intimately knows a culture, that he "has the feel of it," that he completely understands the psychological attitudes of the natives, unless he has a complete command of the language and has spent at least twelve months in intimate association with a particular group. With the time and funds at my disposal these requirements could not be fulfilled. Furthermore, the difficulties of travel and the necessity of making wide movements in order to collect anthropometric data limited the amount of time which could be spent on an intensive study of a single group of Caribs. Although I acquired a considerable number of Carib phrases and the ability to carry on a simple conversation, I make no pretense to a thoroughgoing knowledge of the language. How- 124
ever, a considerable number of the men are able to speak a rudimentary pidgin English and I was fortunate in obtaining the services of a Carib man, Alec William, who in his youth had acquired a comparatively advanced knowledge of English while working in a trading post near the coast. Relations with the natives were always of the best, and on the whole the Caribs entered freely into the spirit of the investigation, showing an eagerness to assist in giving and collecting information. In view of the conditions I felt that, in my limited time, more could be accomplished by gathering data with the linguistic means at my disposal. Consequently, such linguistic material as I have collected is more or less incidental to the main body of the work.

No contention is put forth in connection with this work that a 000
six months' residence with the natives is equal to a more prolonged period of equally intensive investigation. Many of the subtler aspects of the culture might have come to light; certain phases which possibly have escaped me entirely, might have presented themselves; and probably a larger number of variations from the norm would have been noted after a more prolonged residence among the people. In regard to these matters I can only hope that the present paper will provide an adequate and an honest basis for future investigation.

In addition to those arising from linguistic disability and limitations of time, certain errors may come to light for which only

000 the investigator can be blamed. If such is the case, he will welcome their being brought to his attention.

* * * * * *

122 I arrived in Georgetown October 26, 1932. Five days of highly organized activity were spent in securing supplies and staff for the expedition. Without the help of the Governor, Sir Edward Denham, and Dr. W. E. Roth, curator of the Georgetown Museum, and many other government officials, arrangements could not have been completed in the short time which was allowed for them. However, on the first of November I departed on the biweekly coastal steamer for Marbaruma, accompanied by Cedric Farnum, a guide, Henry Ewing, the cook, and about a ton of provisions and camping equipment. At Marbaruma, the government compound near the mouth of the Barima River, we took possession of a tent boat with outboard motor, furnished by the government, and proceeded up the Waini River and into the lower reaches of the Barama where we secured the services of Alec William, who acted as interpreter and crew foreman throughout the expedition, and six other Carib men who served as boat hands. Delay in the arrival of the rains impeded progress on the river which in low water is blocked by sandbars and fallen logs. During one period of ten days, for instance, we covered a river distance of only eighteen miles. The tent boat was abandoned at Kariako and the rest of the journey up the river, over the falls to Sawari settlement, was accomplished in korials or dugout canoes. Later the journey to the vicinity of the headwaters of the Barama near the Venezuelan frontier was completed by trail.

Rice, flour, salt meat, condiments, medicines, technical equipment, and trade goods were carried. A large part of the provisioning for the party was obtained by hunting and the securing of field products from the Indians. Until Mr. Morgan Hills joined me in February I happened to be the only white man in the Barama country.

133 The drainage basin of the Barama is covered throughout by rather thick jungle of which the mora tree is the most conspicuous feature. Along the river banks the forest averages eighty to a hundred feet in height (Plate 1). The river follows a meandering and convoluted course; its height varies greatly with the rainfall,

and as far as Bede's the influence of the tide is felt. The surface 133 of the land rises gradually southwestward to the low divide which marks the Venezuelan frontier. The river country may be divided into an upper and lower part at the Great Falls at Towakaima, which have hitherto formed a barrier to tent boat navigation and consequently to outside penetration of any extent. On the lower Barama three trading posts or "bush shops" are located, respectively, at Kokerite, Massawini, and Towakaima, serving the Indians and the handful of negro prospectors who roam the bush in search of gold. Throughout the area game and fish are usually [136] plentiful.

* * * * * *

I owe thanks in many quarters for personal assistance. Among 122 them, I wish to mention the following: the Division of Anthropology of Harvard University, which financed the expedition; Professors R. B. Dixon, E. A. Hooton and A. M. Tozzer, who not only taught me most of the anthropology which I knew before going to Guiana, but who also advised and encouraged me during and following the period of field work; His Excellency Sir Edward Denham, K.B.E., G.C.M.G., at whose invitation the field work in British Guiana was undertaken and who assisted me in many ways in both a personal and an official capacity while I was in the colony; the late Dr. W. E. Roth, who placed the results of his wide experience and his intimate knowledge of the country as well as his continued personal efforts freely at my disposal; the Honorable John Mullin, Commissioner of Lands and Mines of British Guiana, who provided me with specially drawn maps from the archives of his department as well as making arrangements about tent boat, motor, and camping equipment which were generously furnished me by the government; Mr. S. Morgan Hills of Hartford, Connecticut (First Lieutenant, U. S. Army Reserve), whose hearty companionship enlivened the isolation of the jungle and who, through his practical knowledge of camp life, relieved me of much of the detail of expedition management during the last three months in the field; Alec William, a Carib Indian, an intelligent [115] interpreter, an expert woodsman and boatman, and a loyal friend; Henry Ewing, whose appetising menus dispelled the fatigue of many a hard day and whose loyalty, practical knowledge of bush

122 life, and enthusiasm greatly facilitated my activities in the field; and the many friends and acquaintances in Georgetown and outlying parts of the colony who were always willing to assist the activities of the expedition and who went out of their way to make my stay in the colony pleasant. I am also indebted to Mrs. T. Millard, of Georgetown, for assistance in transcribing Carib music, and to Dr. Harry Shapiro, of the American Museum of Natural History, for advice concerning physical anthropology.

I am very grateful to the Division of Anthropology of Harvard University for undertaking the publication of this work, and to Mr. Donald Scott, Director of the Peabody Museum, whose advice and friendship I value very highly. Miss Ruth Hadfield has labored nobly on the editorial preparation of the manuscript and proofs.

JOHN GILLIN.

THE BARAMA RIVER CARIBS OF BRITISH GUIANA

SUSTENANCE

262 LIFE on the Barama, unlike that reported from certain other tropical environments, cannot be supported by so simple a means as merely plucking the fruits which a bountiful nature places within easy reach of the hand of man. The jungle yields no vegetable products which are or can be used as a staple human diet; and the animals which inhabit the bush have a wary way of eluding unskillful hunters. Likewise the fish of the streams show an annoying liking for the water of their native habitats in preference to that of a cooking pot. The mere business of filling bellies, therefore, occupies a considerable amount of the time and effort of the Caribs, although rarely is this essential activity so demanding as to exclude all others or an enviable amount of leisure.

146 262 The fact that the Caribs are not celebrated in more sophisticated parts of the earth for their culinary accomplishments, with the possible exception of alleged anthropophagous delicacies formerly attributed to them, becomes intelligible after an intimate acquaintanceship with their methods of acquiring and preparing food. The diet, nevertheless, is fairly varied and, as can be said of almost any outlandish food, "is not disagreeable to the civilised palate" after said palate has passed a somewhat unappetizing apprenticeship. The one apparently serious omission from the menu is a regular and proper amount of "roughage," a lack which gives rise to a notable degree of constipation and stomach trouble among the natives.

262 224 The two staples which are absolutely essential to a Carib are meat (or fish) and cassava. They figure in practically every meal to such an extent that the other food products may almost be regarded as garnishings, while on long trips over the trail or on the river they are relied upon exclusively. The men of the family are responsible for the supply of meat and fish. To this end a man usually goes out hunting every few days, depending upon the meat stock which is in the house, and he stays out until he has

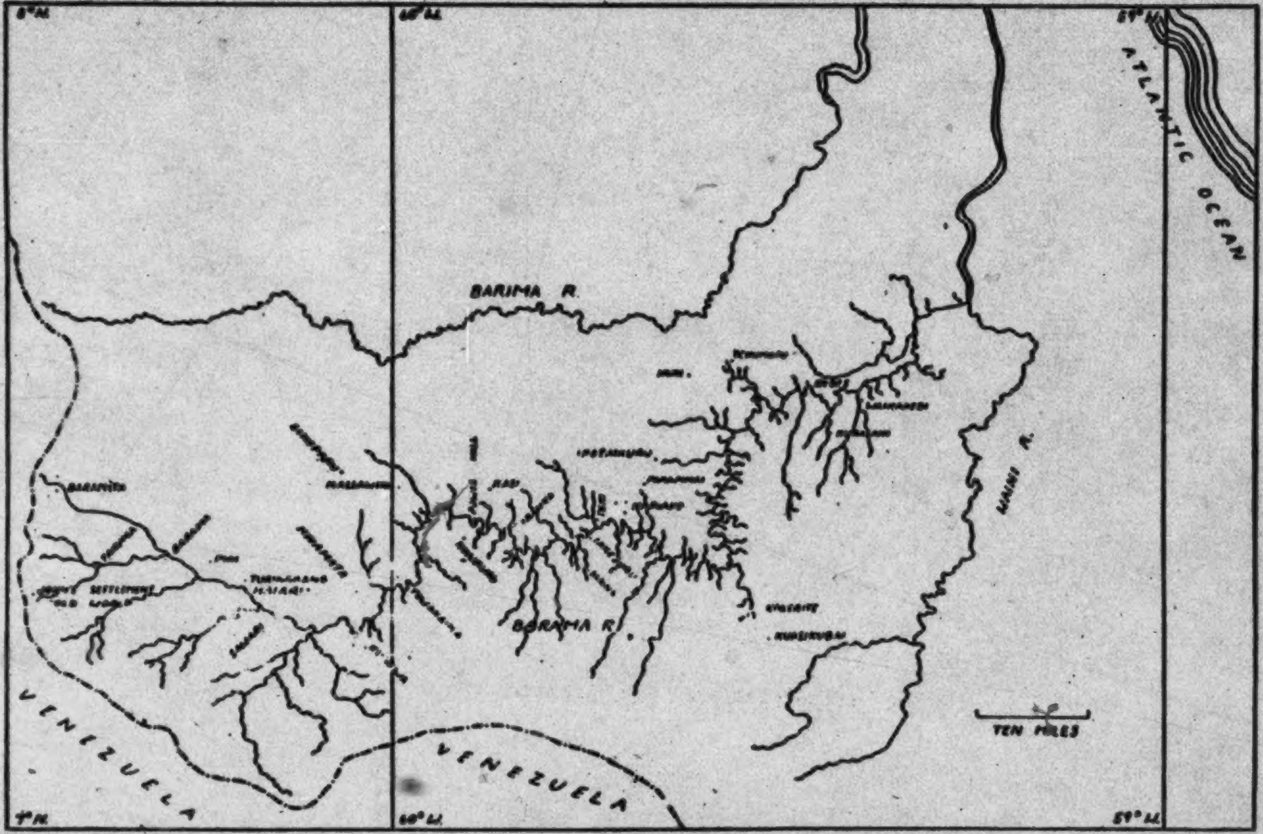
8°N
60°W
59°W
ATLANTIC OCEAN
BARIMA R.
WAINI R.
BARAMA R.
VENEZUELA
VENEZUELA
TEN MILES
7°N
60°W
59°W

FIGURE 1

Map of the Barama River showing all its important tributaries. Carib settlements are located and marked.

something to bring back. No man will return from a hunting ex- 262
cursion empty handed to face the ridicule and anger of his wife; 224
and as a consequence men are occasionally absent from their homes
for two or three days, sleeping in the bush, until they have acquired some game, if nothing more than a turtle or a couple of
birds' eggs, to bring back to the household. Under ordinary circumstances a man usually hunts alone with the help of a dog,
although hunting parties are occasionally formed for the pursuit
of drove animals, such as bush hog, or unwieldy beasts such as
maipuri (bush cow). In fishing a man has his own private lines [226]
which he tends himself, but when a stream is poisoned, the cooperation of several men, and frequently of women and children,
is enlisted.

The women of the household attend to the field products, 241
digging the cassava and gathering the other edibles, as well as 222
the cooking and preparation of all food. In these activities they 462
are assisted by men too old to hunt and by young children. The 887
cutting and preparation of the field, is, however, the man's task.
And both the men and the women cooperate to do the planting.

Hunting. In the procuring of land animals, only three kinds of 224
devices are used: the bow-and-arrow, the trap, and, rarely, the 411
shot gun. Blow guns and spears are not in use at the present time, 177
nor is there any memory of their former use by the Caribs. Such contrivances are said by the old men to have been used by the Akawai who formerly had settlements on the river and they are occasionally brought into the area as curiosities from distant Akawai settlements.[1]

Bows are made from four different kinds of wood and vary 411
slightly according to the material. These four varieties are washiba 313
(Carib, same; unidentified), letter wood (Carib, paidya; *Brosium* 137
aubletti), bopa (Carib, same; unidentified), and yarriyarri (Carib, same, *Anaxagorea* sp.). The washiba bow in cross section is a fat oval; it is somewhat flatter on the belly than on the back and the wood is almost black. The letter wood bow has the same general

---

[1] Alec, for instance, says that when he was young his uncle brought a blow pipe home after he had made a trip to the head of the Cuyuni. There he had bought the weapon from the Akawais. It was made in one piece from a palm stem with the pith removed. His uncle gave him instructions concerning it. If you hit the quarry and it runs away, the poison is spoilt and the blow pipe must be thrown away. "This is because the game runs away with the essence of the poison" robbing the poison on your unused darts of its power and the weapon of its efficacy. To be successful you must try to hit the game two or three times and cut out the parts around the wounds.

411 313 137 shape as the washiba, but the wood has transverse dark markings across the belly of the bow. The bopa bow is flatter in cross section than the two preceding types. These three types of bow are provided with a groove running the full length of the back, in which is held the surplus part of the bow string which is used for strengthening the weapon. The yarriyarri bow is round in cross section, yellowish or light brown in color, and has no groove in its back.

411 The body of the bow in all types tapers gradually from the middle toward both ends. At each end, the taper is suddenly broken by a small shoulder, marking the base of a short blunt-ended peg whittled out of the wood in one piece with the rest of the bow. Around this small peg at each end, the bow string is attached. In an unstrung bow the head is often indistinguishable from the foot. The string is attached to the head by a slipknot, whereas at the foot, the string is attached by two half hitches and carried up the back in the groove. It is held in place in the groove by being bound around the bow upon itself in two places. These bindings, which extend around the entire bow, are at approximately the first and third quartiles, respectively, of the bow's length; and between the two bindings the string is carried twice, so that, in effect, two strengthening cords lie along the back of the middle part of the bow, as can be seen in the illustrations. The strengthening, however, is carried only to the upper binding so that the upper quarter of the bow has no support on its back. The bow string, the strengthening along the back, and the bindings are all part of one unbroken length of kraua cord. When stringing a new bow, a man tests it by bending it, with first one end then the other on the ground, to see which end is stiffer; this end is chosen for the foot; a suitable length of cord is paid out and attached to the foot peg by means of the two half hitches above mentioned, a slip knot is made in its end and the bow string tested for length, after which it is attached to the head. Then the remaining loose cord attached to the foot is bound in the groove along the back to serve as strengthening.

123 313 I had the men teach me to make several bows. In making a washiba bow we went early one morning into the bush and found an old washiba log which had fallen to the ground. With a cutlass, a piece about six feet long, square in cross section, and about three

inches in diameter, was hacked out. The piece of wood was brought 123
back to the settlement and the whole morning was spent in hacking 313
it down to the proper size. First a cutlass was used, then a
wooden-handled knife. A series of hacks or cuts about one-half 322
inch apart was made along the surfaces to be reduced. Then the 123
wood was reduced by a shaving motion of the blade. The afternoon was spent in smoothing down the wood to an oval shape. For this purpose the edge of the knife was used as a scraper, as well as an old cassava grater. Great care was spent in getting the proper taper, and the balance and resiliency of the bow were tested by frequent flexions. Then the ends were determined, with due regard to symmetry, and the pegs whittled at the head and foot. The next morning was spent in making the groove in the back with a broken piece of mirror glass. Then the bow was
smoothed all over with a purumo leaf, which is rough and approximates [314]
the action of sand paper. Following this the bow was taken down to the creek and placed in the water, where it was left for
three days to be seasoned. On the fourth day it was removed and
rubbed all over with aporokune gum, which is said to toughen it [314]
as well as improve its appearance. Then it was strung.[1]

The bow string is made of the fibre of the kraua grass, (*Bromelia* 283
sp.) which is specially cultivated in the fields for this purpose. [249]
The long semi-stiff leaves are shredded through a loop of string attached to a post of the house, as described by Roth[2]. The fibre is then spun into three-twine string by rolling it on the thigh.

Arrows are of several types, but each consists of the following 411
parts (Plate 3, *b*). The head (piatura) is, in these days, made of an 824
old piece of iron, usually a discarded cutlass filed down to the proper shape, or of wood. The epuru is the small piece of wood into which the base of the head is set; on harpoon types the epuru end is pointed and fits into a socket at the base of the head; it is usually made of wawkonse wood. The epuru is set into the end of the hollow shaft (*mapuru*), which is made from a reed-like plant
cultivated in the fields for this purpose and called by the Caribs [249]
mapuru epui (*Gynerium saccharoides*). The shaft is usually split 411
in receiving the epuru and must be bound around with fine kraua 284
824

---

[1] Bow, urapa; head, apono; foot, opinyoni natari; bow st[illegible] urapa amoti; strengthening string, shyatumamoti.

[2] Roth, 1924, *An Introductory Study of the Arts, Crafts, and Customs of the Guiana Indians*, p. 114.

411 284 824 [237] string (binding, epu miotopo). For feathering the arrow (puliwa epawriri) the wing feathers of the powis (*Crax sp.*) are used. Two feathers are employed for each arrow, one for each side. The two feathers are laid on the ground side by side and the spines cut away from the central rib of each feather on the interior side, so that the two "half-feathers" remaining complement each other. The central ribs are not split. The two feathers are then bound on opposite sides of the shaft with their long axes parallel to the long axis of the shaft, so that when viewed broadside both present the same surfaces of the original feathers. Fine kraua twine or cotton yarn is used for binding, cotton being preferable; each feather is bound to the shaft in five places, (feather binding, epawriri miotopo). The knock (yesendano) is made of wawkonse wood and is set into the split end of the shaft which is bound about with cotton thread (knock binding, ityo miotopo).[1]

[381] On those arrows which have removable or harpoon heads, the recovery cord is fastened to the head by kraua binding and a glue made of mani gum (*Moronobea coccinea Aubl.*). The recovery cord is called towoto poyamoti.

411 To straighten the shaft of an arrow, it is held over fire and bent into shape with the hand without the help of other apparatus.

The arrow release is between the thumb and first joint of the first finger (Plate 4, *a*). The arrow shaft is always held on the left side of the bow between the second and third fingers of the left hand.

A bow is between four and six feet long (Plates 4, *b* and 5, *a*), and the arrows are usually of approximately the same length. The feathered part of the shaft is four to five inches long and the head of the arrow ranges between six and twelve inches. Figure 2 shows the more common types of arrow heads.

The aranseta (Fig. 2, *a*) is a plain laurel-leaf point.

411 224 The rapa (Fig. 2, *b*) is used for hunting hog and is provided with a transverse peg of wood at the base of its leaf-shaped point. This peg serves as a stop so that the arrow immediately comes out after the quarry is hit and is not broken while the hog thrashes about in the underbrush.

The takoshi (Fig. 2, *c*) is provided with one deep barb on one

---

113 [1] For South American distribution of this method of strengthening the arrow-butt, see Nordenskiöld, 1924, *The Ethnography of South America seen from Mojos in Bolivia.*

side. It is sometimes detachable. The taoto (Fig. 2, *d*) is double 411
barbed. 224

The pinya is the general term applied to that type of arrow which has a detachable head attached by a long recovery string to the shaft. The shaft acts as a drag to prevent the escape of the game in thick bush.

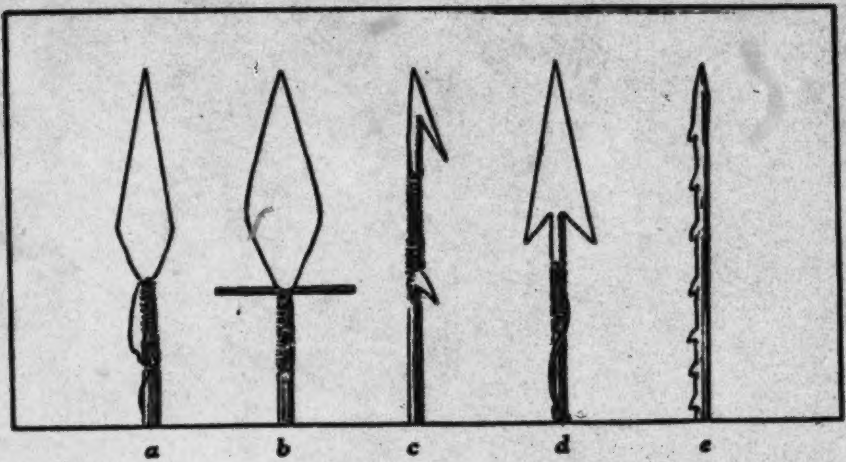

FIGURE 2

Arrowhead types. Left to right: aranseta; rapa; takoshi; taoto; matowai.

One fish arrow (no special name) has a head like that of the 411
aranseta, but is provided with a line attached to the tail of the 226
shaft. The other end of the line is tied around the wrist of the fisherman.

The tarapa is another type of fish arrow, provided with a cluster of three iron or wooden points as figured in Roth.[1]

Matowai (Fig. 2, *e*) carries a wooden head with many small [223]
barbs along one side. It is used for birds.

A utensil sometimes used as a weapon is the cutlass. No Carib 411
will venture out of sight of his house without his cutlass. These implements are made of iron, forged in one piece with a hollow handle which, however, is never hafted. They are obtained in trade and are used for every purpose, from cutting trails to shaving, to which a cutting or hacking implement can be put. Occasionally small animals are killed with the cutlass.

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[1] Roth, 1924, *An Introductory Study of the Arts, Crafts and Customs*, Fig. 54, B.

411
177
A few of the men possess dilapidated shotguns which they have obtained from traders or gold diggers. These formidable weapons are known locally as "gas pipes" and are characteristically patched together with bits of string and wire. They are potentially as dangerous to the hunter as to the quarry, because their rustiness and generally feeble condition result in comparatively numerous explosions of the barrel with very serious results. Each hunter has one or two brass shells which are constantly reloaded with powder and shot. The high value of these accessories prohibits their waste and a man seldom shoots until he is sure of hitting the game.

231
224
A man usually goes hunting with his dog, which is invariably an unidentifiable mongrel trained to follow a scent without barking. To improve the sense of smell the dog is forced to submit to certain practices intended to stimulate its olfactory centers. Juice of the red pepper is poured down the animal's nostrils. This "makes the cold" which obstructs the olfactory areas "come out." Cleansing of the dog's nose may also be accomplished with a small twig. The animal is usually deprived of food for a full day before being taken on a hunting expedition so that it will have a personal interest in the search for game. Although the dogs lying around an Indian house always have a more or less dejected and emaciated appearance, a certain amount of care is taken by the Indians to keep them in good hunting condition. Mosquito worms are dug out of their skin as soon as discovered and chiggers removed from their feet. One often sees a man sitting outside the house examining the feet and skin of his dog.

224
The general hunting technique is to follow the dog to the vicinity of the game, whereupon the dog is tied to a tree with a piece of bush rope or, if well trained, made to lie down. The hunter then stalks noiselessly up to the quarry, so close as to permit an almost certain shot. Should the animal discover the approach of the hunter and take flight, the latter knows a call which he can use to attract the curiosity or favorable attention of the species in question. These calls are either whistling sounds made with the lips or grunting and humming sounds produced in the throat of the hunter. In many cases they have no apparent resemblance to the call of the animal itself, but on frequent occasions I have seen an animal about to take flight arrested with apparent curi-

osity and rooted to the spot as if hypnotized by the call, while the 224
hunter approached closer for a better shot. Arrows as well as powder and shot are valuable, and no hunter takes any unnecessary risk of losing or breaking his weapons.

After the animal has been killed it is trussed up with bush rope 224
for carrying back to the settlement, which may be several hours' 251
distance. The method of trussing varies with the species of animal, 483
but each method is adapted to the species in question so as to make the easiest load possible under the circumstances. If the game is a large animal such as a deer or bush hog, it is disemboweled on the spot, and the parts which are desired cut out. Usually the four quarters and the teeth are taken. If there is a stream near, they are carried there and washed, after which they are trussed up for packing homeward. Smaller animals, such as birds and akuri, are cleaned after they arrive at the settlement. In case the hunter is traveling and he bags a large animal, he builds a fire and a babracote, or smoking frame, on which, before he proceeds on the journey, the meat is smoked after it has been cleaned. In this climate untreated meat spoils within twenty-four hours.

The traps in use on the Barama are the gun or arrow trap, the 224
bird trap, and the noose trap for birds[1], the spring trap for rats 136
(pandaki), and the labba trap. 262

Among the animal foods which are more or less regularly hunted and eaten are the following:

Accouri, or akuri (Carib, same; *Dasyprocta aguti*).
Labba (Carib, same; *Coelogenys*).
Armadillo (Carib, yesi).
Ant bear (Carib unknown to author; *Myrmecophaga*).
Bush hog: large (Carib, ponjo; *Dicotyles labiatus*); small (Carib, abuya; *D. torquatus*).
Deer of several varieties.[2]
Turtle of several varieties and their eggs.
Manati (Carib) or sea cow.
Wild honey.
River and land crabs.
Otters or water dogs. (?*Pterura Sambachii*).

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[1] Roth, 1924, *An Introductory Study of the Arts, Crafts, and Customs*, Plate 41, Fig. 3, A. B, and C.

[2] Tibisiri (?*Cervus humilis*).

224 Bush cow (Carib, maipuri; *Tapir Americanus*).
136 Birds of the following varieties, particularly:

- 262 Powis or bush turkey (*Crax* sp.).
- Mamm (tinamou).
- Dukwaru or djokoro.
- Wicissi ducks.
- Cock of the Rock (Carib, unknown to author; *Rupicola elegans*).

Bird eggs (particularly mamm eggs).
Rats.

262 The tchiri, a white worm which lives in the pith inside the stem
136 of the turu tree, is fried on the cassava pan and eaten. The kom-
252 buru worm which lives in decaying wood is also eaten. The Caribs do not eat tiger, snake, camudi (water snakes), monkey, chicken hawk, or "crows" (vultures). Abstinence from these forms of animal food is based on tribal taste and has no religious significance.

Kushie ants are occasionally consumed. [They are parched on
[825] the cassava pan and the abdomens are eaten. There is a long white worm which is always found in a kushie ant hill, called by the Indians two-headed, because the tail closely resembles the head. It is said to be the "mother of the ants," makoyumo (probably *Amphis baenae*). The muro frog, whose quacking sound is regarded as a sign of rain, is sometimes eaten and is said to taste like "young fowl."

The magico-religious beliefs and practices concerned with hunting will be taken up in the chapter on religion.

Methods of skinning the "accouri" are as follows: An incision is made from the neck to the sexual opening; branching incisions are then made to remove the hide of each of the legs; an incision is made encircling the neck; and the whole skin excluding that of the head is removed in one piece. The head is severed from the body, the abdominal cavity is opened by a sagittal incision in its anterior wall and the contents of the cavity are removed. The carcass is then dismembered for cooking. Essentially the same method is used for other fur or hair-bearing animals.

226 **Fishing.** European fish hooks are obtained in trade. If these
[177] are unavailable, hooks are made from common pins or from a
824 certain thorny bush of the jungle. Fish rods of yarriyarri (*Anaxa-*

gorea sp.) are the most common; the line is made of kraua fibre. 226
Rod fishing is most commonly done from korials, although fre- 824
quently little boys amuse themselves by fishing with a rod from [857]
the bank. Each night a man, if his settlement is near the river, puts out a set line, to which are attached several hooks. These set lines are stretched across the river, fastened at either end to a stake of yarriyarri set in the water near the shore. Usually each hook has to be visited in a korial, although some more ingenious members of the tribe, perhaps through outside suggestion, have [176]
rigged up pulley arrangements at the opposite shore so that the line can be set and pulled in by a man standing on the bank.

Fish are also shot with arrows of the types, described above, especially made for the purpose. This seems to be a method very rarely used at the present time, and during my sojourn in the Carib country I saw it employed only twice. The men say that fish shooting is difficult because of the vegetable stain in the water which reduces visibility, and is only effective near rocks where the marksman can gain a steady perch high enough above the water to see the game.

The most productive fishing method is poisoning. The haiari 226
root (? *Lonchocarpus* sp.) is the most generally used poison on the 137
Barama. Two varieties are recognized, the "black haiari" (? *L. densiflorus*) and the "white haiari" (? *L. rufescens*). The former is the most commonly found and oftenest used for fish poisoning. The two other fish poisons generally used in the Barama country are konami (? *Clibadium* sp.) and wa'u (Creole, mora balli). Other poisons used in the Guianas are mentioned by Roth, but I have failed to find evidence of their use in this area

The river itself, as well as practically all of its tributary creeks, 226
is regularly poisoned, although I understand that this practice is forbidden by colonial law because of the devastating effect which it is supposed to have on the fish supply. As one proceeds up the Barama one is impressed by the fact that across the mouth of almost every creek stands a wickerwork fence of nibi (a bush plant which is also used in making basketry), a sure sign that the creek has been poisoned, because the fence has been placed there to catch the dead or stupefied fish as they float downstream under the influence of the poison. When it is decided to poison a creek or river, the whole settlement usually turns out and the affair is

226 made a sort of picnic or field day. The women bring supplies of cassava bread and peppers, and build fires near the site of the poisoning for the purpose of cooking the fish, part of the catch being eaten as part of the picnic lunch. Usually the men have pre-
278 ceded the women to the spot early in the morning, built a fence across the water downstream and collected a supply of haiari root from which they have removed the bark and which they have split into shreds. Each man has also cut a club or beater of yarriyarri wood two and one-half to three feet long, with a smooth handle fitted to the hand and a head of larger diameter. They bring the shredded haiari and the clubs to a point in the stream where semi-submerged logs or rocks arise from the water, which, below this point, must be relatively quiet and sluggish so that the poison is not too quickly borne away. Each man takes an armful of haiari and his club and chooses a suitable rock or log on which to pound the haiari, while he stands in the water alongside. In the meantime the women and children have deployed downstream, armed with cutlasses and knives with which to kill the stupefied fish. Each man then takes a small bundle of his haiari root and begins systematically to pound it on the rock or log which he has chosen, dipping it frequently into the water to free the juice until the haiari is exhausted of its poison. The juice when first freed has a whitish milky appearance which clouds the water. It seems to be heavier than the water itself and turns a rusty red with age. In the shallows of the stream which has recently been poisoned one sees the reddish viscid remnant of the haiari which has collected on the bottom. There seems to be some mystery concerning the effects of the poison on the fish and the opinion among the Caribs is divided as to whether the haiari would actually kill fish or merely stun them. They become sluggish and tend to float belly upward on the surface, but I have noticed that a fish "poisoned" by haiari, even when apparently dead, quickly revives when put into fresh unpoisoned water. On the other hand, the Indians also
[242] use the juice of the haiari to poison the ground around the roots of the tobacco plants, in the belief that it poisons the root grubs which kill the plants.[1]

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[1] See Roark, R. C., "Rotenone." *Industrial and Engineering Chemistry*, Vol. 25, June 1933, pp. 629–642: "Rotenone, $C_{23}H_{22}O_6$, a colorless, odorless, crystalline constituent of certain tropical fish-poison plants, is thirty times as toxic as lead arsenate as a stomach poison to silkworm, fifteen times as toxic as nicotine as a contact insecticide upon bean aphids, and twenty-five times as toxic as potassium cyanide to goldfish, and yet is harmless to birds and mammals

226 The women and children, along the banks or in the water, kill
252 the apparently stupefied fish by slashing them with their cutlasses
and knives. The fish are then put in carrying baskets and carried
to the picnic spot. For the picnic lunch the smallest specimens
only are eaten, usually being roasted over the fire on the ends of
fresh green sticks, in the same way in which we roast picnic frankforters.
The small fish, from which the heads and scales have not
been removed, are then put with a small pepper into a sort of sandwich
of cassava bread and eaten with much relish and gay talk,
[264] punctuated by the necessity of inserting the fingers in the mouth
to remove those bones which cannot be chewed and swallowed.
The larger fish are deprived of their scales with the help of a piece
of wood which has been sharpened to a chisel edge. Then they
are disembowelled, decapitated, and split sagittally along the
back without removing the vertebrae or other bones. They are
placed in carrying baskets with moist leaves and carried back to
the settlement. If the people have a supply of trade salt, a number
251 of slits are made parallel to the ribs and the meat is rubbed thoroughly
with salt and placed out in the sun to dry. If there is no
salt the meat is slit in the same way and dried over a babracot.

278 The wa'u poison is hacked into small chips and these are thrown
226 into the water. Only the heart of the tree is used. The chips are
thrown into the water in the evening, several hours being required
for the poison to take effect. The next morning the dead fish may
be collected. The wa'u is apparently less successful than haiari
and is only used in the absence of the latter.

The poison made from konami is called sokoi. The konami leaf is pounded into a mash which is mixed with grated, unsqueezed,

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eating it. . . Rotenone is a constituent of the following plants, comprising seven genera of the bean family (Fabaceae or Leguminosae): *Cracca cinerea, C. virginiana, Derris Chinensis, D. elliptica, D. malaccensis, D. polyantha, D. uliginosa, Lonchocarpus nicou* (cube), *Lonchocarpus sp.* (haiari), *L. chrysophylus* (?) (Nekoe), *Millettia, Mundulea suberosa, Ormocarpum, Spatholobus roxburghii*. . . Rotenone is now known to be harmless to mammals when taken by mouth, but many early writers on derris spoke of its dangerous poisonous qualities. . . Buckingham in 1930 made numerous tests on dogs, cats, pigs, sheep, cows, chickens with rotenone and with the ether extract of derris. He concluded that, when administered by mouth, pure rotenone produced no visible effects in dogs, cats, pigs, or sheep in doses (for dogs) up to one grain per pound of body weight and expressed the opinion that even larger doses would be harmless." Roark summarises other experiments showing the non-toxic effects of rotenone on mammals, its extremely toxic effects on fish, and its variable effects on various species of insects. It is concluded that rotenone, the poisonous principle of haiari, is a stomach poison, although the physiological effects are not described. On this subject see also Killip, E. P. and Smith, A. C., "The Identity of the South American Fish Poisons, 'Cube' and 'Timbo'." *Journal of the Washington Academy of Sciences*, Vol. 20, No. 5, March 4, 1930, pp. 74–81; Roark, R. C., "Excerpts from consular correspondence relating to insecticidal and fish-poison plants." U. S. Department of Agriculture, Bureau of Chemistry and Soils, Insecticide Division, June 1931; Killip, E. P. and Smith, A. C., "The Use of Fish Poisons in South America." *Smithsonian Report for 1930*, pp. 401–408, Washington, 1931.

278 bitter cassava, and baked into small balls which are dropped into
226 the water where they are swallowed by the fish. A fish which has been gullible enough to swallow this fraud soon loses control and floats to the surface where it is captured by the fisherman.

226 I did not observe nor hear of the use of fish traps or of nets, al-
136 though these appliances are reported from other parts of the colony.

262 The fish most commonly used for food are the haimara (*Hoplias macrophthalmus*), huri (*Hoplias malabaricus*), yarrau (*Hypostoma* sp.), low-low (*Silurus* sp.), pirai (*Pygocentrus*), cartabak (?*Tetragonopterus*). The moracot, so well known for its fighting tendencies and flavor in other parts of the colony, is found only in the tidewater portions of the Barama. Hook baits include spiders, calabash pap, cassava bread, and various worms.

Among other food products obtained from the streams are sting-ray (caught on hooks and tasting somewhat like tripe when cooked), small periwinkles or "snails" of two sizes called respectively mari (small) and kue (large), frog eggs.

241 **Vegetable Foods.** Every household has its own agricultural field lying at some distance from the house clearing. The slash-and-burn method is used in agriculture, a method which, in the absence of artificial fertilizers, requires the opening up of a new field usually every third year due to the exhaustion of the soil.

I do not intend here to enter into a detailed description of agricultural practices, inasmuch as similar procedures to those followed by the Caribs have been described by Roth, Schomburgk, Farabee, and others. When choosing a spot for a field, the first criterion is good drainage, and for this reason the fields are frequently referred to as "cassava hills." Associated with the topographical position in the problem of drainage is the character of the soil. The proper soil is called "white dirt" and takes its color
313 from the large amount of sand mixed with the loam. First the
241 underbush is cleared away with cutlasses and heaped into piles.
[417] Then the trees are cut down with iron axes obtained in trade. For felling large trees with heavily buttressed feet, scaffolds of small logs tied together with bush rope are built ten to fifteen feet above the ground, on which men may stand to do the chopping.

221 The tree felling is usually done during the rainy season and
241 the movable logs and brush piled into heaps. Some time after the advent of the dry season, the logs and brush are burned, after

which the crops are planted in the ashes among the stumps and 221
charred logs (Plate 5, *b*). The field is usually ready to burn about 241
three weeks after the start of the dry season and is allowed to burn
for about a week. In the planting women assist the men. Two [462]
implements are used, the hoe (sambá) of iron, which is obtained 241
in trade, and the digging stick, which is merely a long pole three 412
to four inches in diameter and five to eight feet long with a sharpened
end. The latter implement is held in both hands and driven
repeatedly into the ground to make a hole in which to plant such
things as plantain. The hoe is used for loosening the ground preparatory
to planting cassava shoots, maize, and similar crops.
Cassava of the "bitter" or "poisonous" variety (*Manihot utilissima*) 244
is the staple vegetable product of the Caribs. It is propagated
by inserting young sticks cut from mature cassava plants
into the ground at an angle. Each stick must have several shoots
or buds and must show milk when it is cut. Cassava growing in
the field is known as mainyá; the root of the cassava is called
kiédi; and baked cassava bread ready to eat is arépa. After planting,
the young cassava is weeded for a few weeks, following which
it requires no further care until the roots are ready to be dug, which [462
usually is the case after about nine months. The weeding is done 857]
by women and children. Cassava is a perennial which will produce
a second crop without further attention. The third crop is usually
poor because of exhaustion of the soil.

The roots are pulled up or are dug with hoes by the women, who 462
usually go to the field every two or three days to replenish their 244
supplies. They are placed in walishas (a type of carrying basket) 252
and brought back to the house, where they are first washed free of
earth with water brought from the creek in a calabash or pot.
Then they are peeled or scraped to remove the bark-like skin
(Plate 6, *a*). This process is called ipityali (I scrape cassava).
The white peeled roots are then washed again (Plate 7, *a*) 252
and grated (Plate 6, *b*). The graters now used are made of tin 415
perforated with a pattern of concentric circles of small holes
punched with a nail (Plate 7, *b*). The obverse surface of the perforated
tin is rough and is bent over a log into a convex shape much
like a larger edition of the tin nutmeg grater which is used in
American kitchens. The graters average about eighteen by eight
inches, and when in use are fitted onto the convex surface of a

415 block of wood which preserves their shape. The block is made of
252 konta wood, and before the introduction of tin was studded with
[177] small points of quartz and used as a grater itself. In grating the
woman sits on the ground with her legs folded under her and
places the grater inside the concave surface of a semicylindrical
trough made of one piece of bark. The grater leans against the
side of the trough next to the operator with its long axis perpendicular
to the long axis of the trough. The ends of the cylindrical
roots of cassava are assiduously rubbed against the grater until
the whole root is reduced to a white mash in the trough (Plate
6 *b*). When the grating is completed the matapi or cassava squeezer
is taken down from the cross beam of the house on which it has
[295] been hanging (Plate 9, *a*). This ingenious device, which has been
described numerous times by travelers in the Guianas and the
Amazon country, is a tube of basketry woven by the men.
When the tube is full it is suspended by a loop at its upper
end from the end of a beam, while through the loop at the
tube's inferior end a long pole is inserted. The end of the pole
is caught under a cross beam tied for the purpose at the proper
height to one of the uprights of the house. A long length of the
pole protrudes through the loop on the opposite side and on this
end the woman sits, so that the pole becomes a lever, actuated by
the weight of the woman, for elongating the matapi. The leverage
thus exerted elongates the tube, reducing its diameter and exerting
on the contents a strong pressure which squeezes out the juice of
[263] the cassava mash. The juice (eshúru) drips into a pot placed
below the inferior end of the matapi and is later boiled to make
cashidípyo (Creole, cassarip), used for flavoring the Carib national
dish, "pepper pot." The poisonous principle in the cassava
juice, hydrocyanic acid, is freed by boiling.

251 The squeezing of the cassava mash usually occupies several hours. After the juice has been completely expressed the mash, now in the shape of a long cylindrical cake, is removed from the matapi and placed on the cross beams of the house, above the fire, to be smoked. It is believed that unsmoked cassava is harsh and causes one to choke in eating it. As cassava bread is made from day to day, the required amount of the cylindrical cake is broken off and pulverized into meal and sifted through a basketry sifter into a basketry tray (Plate 8, *a*).

The "pan" used for baking cassava is, in these days, an iron disc 252
about eighteen inches in diameter obtained from the trading posts. 177
I saw only one example in use of the clay discs formerly employed for this purpose. When ready to bake bread a woman first heats the pan, which is supported on stones above the fire. The fire is reduced to a bed of coals and strips of bark are laid around its circumference, so that a circle of small flames licks the outer edge of the cassava pan, while a bed of hot coals heats the interior. When the pan, is at the proper temperature the woman takes her fan, made of basketry, which she uses for blowing the fire, and scoops up a "fan-full" of the sifted cassava and deposits it in a heap in the middle of the pan. Then she works it about with the fan until the pan is covered with an even thickness of meal. The edges are turned inward and smoothed with the fan so that no meal drops off the pan into the fire. As the "bread" bakes, the particles of meal consolidate into a cake. When the cake is considered sufficiently cooked on one side, the fan is inserted under its inferior surface, in the manner of a pancake turner, and the whole cake is deftly flipped over on its other surface. When completed the cassava bread is a disc averaging about fifteen to eighteen inches in diameter, looking somewhat like an immense white pancake. Cakes of different thicknesses are baked, depending upon the taste of the household, and upon the use to which they are to be put. Very thick cakes three quarters to one inch in thickness are distinguished for their soft, succulent, semi-cooked interiors, but are not good as food supplies to be taken on trips or to be kept for a long period, as they tend to mould.

The broad leaves of the plantain tree and of the poro tree are 251
used to wrap the cassava bread for preservation. The arepa and 252
the leaf must both be dry, but if well packed the bread will keep in good condition for three months or more.

In addition to bread and cassarip, starch and two alcoholic drinks, cassiri and paiwari, are made from the cassava. In making the starch (sipipya) the extracted juice of the cassava is collected in a pot and allowed to stand until the starch has settled to the bottom. The liquid is then poured off and the starch set in the sun where it becomes dry like flour. It may then be mixed in meat broth to make soup, or it may be baked on the cassava pan into cakes, which, however, are usually smaller and thinner than

251 cassava cakes. The baked starch is called sipipya keipyo or mimyi.
252 The preparation of cassiri and paiwari is described in the section on stimulants.

245 Plantains (parurune) of two varieties are grown in the fields.
824 The aratan is comparatively small and is distinguished by the fact that the trunk of the tree is black. The taposa has a long thick fruit and a gray trunk. In planting, suckers are taken from the root, put in a hole made with the digging stick, and covered with earth; sometimes wood ashes are put in the bottom of the hole beforehand. The tree bears fruit about ten months later.
[462] Both men and women cooperate in the planting, although only men pick the fruit which is detached from the tree in large bunches
262 like bananas. The fruit may be eaten raw when it is ripe, that is,
252 when the outer skin is yellow. Both ripe and green plantains are boiled. Green roasted plantain is a great delicacy; the skin is removed and the fruit placed in the ashes of the fire; when finished it is split and spread with grease or gravy and eaten with the hands. Finally, the green plantain may be grated raw and baked into a thin cake on the cassava pan. A plantain leaf is laid on the pan before the moist mash is spread for baking. The leaf is also in constant use as wrapping material, to wrap cassava cakes, to cover loads in walishas (carrying baskets), and for all purposes in which wrapping material is required.

245 Bananas (paruru) are planted in the same way as plantains
824 and bear in about the same length of time (ten months). Ten
252 varieties are distinguished: the small red banana is called maripyemyu and bears early; the large yellow type is called idinyuku; the largest reddish banana (kyasakore), bears earliest of all the varieties, is black when ripe, and is used mostly for roasting; the large yellow variety is called wepyunsokai and ripens in the middle of the season; the small sour reddish banana, called "sour fig" by the creoles, is called sari arya by the Caribs and is distinguished from the maripyemyu by its tart flavor; the greenish type (ipitakamapo), known as the "apple banana" and the "Cayenne banana" to the creoles, is usually boiled; the black banana is called mekorumyo; the stubby green type is called mutuku; and
245 the medium red variety rejoices in the name of pomere or pomede.

824 Four varieties of pineapple (nana)[1] are grown: kashushipyopo,

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[1] *Ananas sativa.*

largest and juiciest; ekupu, slightly smaller than the preceding 824
type; toshiare, long and thin, the sweetest of the four types; 245
kuyarimyo, longer, thinner, and slightly sourer than toshiare.
In planting, shoots are taken from the roots of mature plants and
put in holes made in the ground with the digging stick. The plant
bears in about a year after planting. The fruit is picked when it is
yellow, and the skin removed with a knife. The fruit is mostly used [273]
to make an alcoholic drink called tanemu, the pulp being grated
into a juicy mash and allowed to set for several days after having
been mixed with water. Occasionally the ungrated fruit is eaten
raw.

Three varieties of yams (napoi)[1] are known to the Caribs; 244
apotonongnapoi, the large white yam; tawimididishye, the small 824
white yam; tupununapoi, the purple yam. They may be planted 262
at any time of year and ripen in ten to eleven months, i.e. when the
leaves die. For food they are eaten boiled, after being peeled. A [252]
drink, napoishuru, is also made from yams, as described in the
chapter on stimulants.

Tanyas and eddoes are also grown in the fields and are boiled in the pot after being peeled.

Sugar cane grows in every field. It is planted by inserting a 249
shoot into a small hill of loose earth. It is eaten as a confection,
being chewed like a stick of candy after the outside bark has been
removed. The juice is also expressed in the cane mill (Plate 8, *b*) [273]
and used as an ingredient in cassiri and other alcoholic drinks.[2]

Two types of "punkin" or squash (wayoma) are to be found in 244
Carib fields: apotono wayomo, large and spherical; takunshishe 824
wayomo, long and thin, with flesh drier and of superior flavor. The 252
squash is planted from seed and bears in three months. As soon
as the fruit is ripe the seeds are planted again so that a relatively
continuous supply will be on hand all the year around. The squash
is eaten only boiled; it is never dried or made into bread or cake.

Maize (awashi) of red (kuwata) and white (tamuneng awashi) 243
varieties is raised. The seed is planted in small hills made with 824
the hoe. While still green, the corn may be roasted on the cob in 252
the husks; the ear is simply stuck among the hot ashes of a fire.
When ripe, the kernels are removed from the cob with the hands

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[1] *Dioscorea* sp.

[2] For a discussion of the probable introduction of this type of cane mill by negroes and for its distribution in South America, see Nordenskiöld, 1930, *Modifications of Indian Culture through Inventions and Loans.*

252 and pounded in a wooden mortar with a wooden pestle to make
243 corn meal (awashi apopo). This meal may be mixed with cane
juice and baked into a cake on the pan or it may be boiled and
eaten hot like porridge.

245 Limes (idiyoma) are grown in the fields. The seeds are scat-
[272] tered on the ground and seedlings replanted. Lime juice is mixed
with water to make a sort of limeade. Bina plants (see section on
Religion) are also grown in the fields.

The papaiya (*Carica papaya*) is grown in fields and also in house
[757] clearings. The fruit is eaten raw when ripe. In the green state the
rind is boiled and considered a good regulator for stomachic
troubles. The leaves are sometimes dried and rolled into cigarettes,
249 alone or with tobacco leaves. Tobacco plants are grown from seed-
lings in the agricultural fields. (See section on Stimulants.)

In addition to the foregoing food products, the kraua grass plant is grown in the fields. The leaves of this plant resemble those of the pineapple and, as stated heretofore, are shredded so that the fibre may be used in making cord and string. It is planted from suckers in the same way as the pineapple.

244 Under the head of agriculture must be considered three other
263 species of plants which are grown, not in the agricultural fields
proper, but in the clearing which surrounds the house. The pepper
(pawmi)[1] is an important part of the Carib menu and together
with cassarip furnishes the only condiment, with the exception of
occasional trade salt, which is used by the natives. Five varieties
[824] of pepper are cultivated: poroporo, big, round, red, very hot;
kawnamu, small, green; sidimya, very small and red; yanakatu,
long, thin, and green; arapo, long, green (creole, lady finger).
They are planted from seeds in holes made with a stick. They are
cooked with meat and vegetables in the pepper pot, and are also
eaten raw as garnishing in sandwiches of meat or fish and cassava
[757] bread. As a remedy for headache a feather is rubbed in the pulp
of a pepper and drawn across the eyes. Pepper juice is dropped in
276 the eyes for headaches. Aremi emu (magicians) drink a mixture
of pepper juice and water to induce the psychic state necessary for
communication with the supernatural powers.

244 The calabash bushes are a familiar shrub in all house clearings
824 (kwa'i, calabash; kwa'yepwi, calabash bush). Four types of

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[1] *Capsicum* sp.

244 calabash are cultivated: a, apotonong kwa'yepwi, large, spherical
824 in shape except for small "spout" near the stem, grows on ground
vine; b, morutuku, long, like a water melon, grows on ground vine
like a melon; c, pawsi, small and elongated, grows on bush; d, shi'-
iyongkwa'imyako epu, small and globular, grows on bush. Types
a and b are planted from seed. They are perennial. Types c and
d are planted from shoots cut from a living bush. The vines bear
412 in seven months, the bush types in a year and a half. The pap
226 from the inside of the fruit is sometimes used as fish bait and is
262 sometimes cooked as a vegetable, but the principal use to which
the fruits are put is in dried form as vessels for liquids. (See
section on Utensils.) An interesting example of sympathetic
789 magic is the practise of tying to the calabash plants the shells of
the large landsnail, which in shape and color often resemble a small
calabash. This practise is held to insure a good yield from the
plant.

248 The cotton (maru'epu) trees are also planted near the houses. They are planted from seed and reach a height of eight to ten feet. They are said to bear in four to five months. Only one variety is grown. The seeds are removed by hand from the cotton bolls and are not used for any other purpose.

222 A large number of foods are gathered from the forest in season.
262 The following is only a partial list of the edible bush products.
137

Plums (mope)[1] — bear once a year, about January; round and greenish in color; eaten raw and boiled.

Waiti — fruit in a pod like beans, grows on tree; seeds surrounded by sweet velvety meat; three varieties: paidyowa, long pod; posindyo, small short pod, grows along river banks; anakara, broad stubby pod. The seeds are sucked, but the fruit has little food value.

Asipoko — a round reddish fruit with soft tart flesh.

Arawiya — plum-like fruit.

Sawari nuts (*Caryocar* [*Pekea*] *tuberculosa*) — the Brazil nut of commerce.

Mora seed (*Dimorphandra mora Bth.*) — in times of scarcity grated and baked into bread, sometimes mixed with cassava.

Greenheart seed (*Nectandra rodioei Hooker*) — same use as mora seed.

Ballimanni seeds (?sp.) usually eaten by accouri and labba, but used by man in time of want.

Cashew nuts (*Anacardium sp.*).

The fruit of the kokerite palm (*Maximiliana regia*).

Fruit of the ite palm (*Mauritia flexuosa*).

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[1] ?*Spondias lutea.*

222 The "cabbages," or fresh shoots, of several palms[1]
262 Akoyuru seed (*Astrocaryum tucuma*).
137 Arrow root (*Maranta indica, Miramosissima*).

263 Such salt as is eaten nowadays is obtained in trade. Some of the older people, however, remember seeing leaves of certain trees burned and the ashes mixed with food as a condiment.

252 462 **Cooking.** The women of the household cook all food which is eaten at home, although men are able to prepare their own meals when unavoidably detained in the bush. The desire to have the women do the cooking, as well as the other pleasures of connubiality, accounts for the fact that a man going on a long journey will always attempt to have his wife accompany him.

251 Uncooked meat may be preserved by salting and by smoking over the fire.

252 Certain foods may be roasted in the ashes, others roasted on the end of a green stick, others baked on the pan, but the most universal way of preparing vegetables and meat is to make them into "pepper pot." In every Carib house a pot will be seen on the fire stones at almost any time of day. Meat and vegetables are cut into small pieces and put into the pot with water and a suitable amount of cashidipyo and set to boil. The cashidipyo lends a slightly acrid or peppery taste to the mess, somewhat like the flavor imparted by Worcestershire sauce.

264 No set times are observed for meals, although food is quite regularly taken upon arising and in the evening. Men and boys eat their fill from the pot alone, after which the females are allowed to stay their hunger with the remainder. One usually squats over the pot with a cake of cassava and a pot of peppers near by. One reaches into the pot with the bare hands and extracts a piece of meat or a vegetable which may be popped into the mouth or may be laid on a piece of cassava bread, which is bent over to make a sandwich. According to the dictates of personal taste a pepper may be included in the sandwich. If one desires the gravy in the bottom of the pot, one soaks a piece of cassava bread in it. When the pot is emptied more ingredients are added without cleaning
[252] out the pot. In this way there is always a supply of cooked food on hand, and the constant simmering keeps it from spoiling.

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[1] ?*Oreodoxa, Areca oleracea, Euterpe oleracea.* See Schomburgk, 1922-23, *Travels in British Guiana*, Vol. I, p. 33.

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515 The hands are usually washed previous to eating, and it is a frequent practice to go to the creek for a bath immediately after a meal.

264 Upon arising in the morning a calabash of sweet (unfermented) cassiri is frequently taken as a pick-me-up, following which a search is made of the pot for breakfast. During the day those individuals who are about the house raid the pot at will. In the evening, when the men have returned from the bush and the women from the field, food is usually taken by all at the same time.

RAIMENT

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439 SARTORIALLY the Caribs of the Barama still present a primitive appearance. Trade cloth, it is true, has been making its way up the river in limited quantities for at least a hundred years, as the testimony of Schomburgk informs us. Its dearness and the intermittent character of the sources of supply have greatly restricted its use. But throughout the entire Barama area in 1932–33, trade cloth was in use for making the loin cloths of both sexes. [286] The old method of weaving "laps" from cotton and bark fibre has apparently been completely forgotten. In the settlements along the lower part of the river, where contact with trading posts and prospectors is relatively frequent, practically all of the women have dresses of some sort made from imported cloth, and in these lower communities many of the men possess singlet undershirts, short khaki trousers, and old felt hats, articles which comprise an important part of the stock of a trading post or of the "trade 439 goods" of any expedition coming into the area. Trading posts or 177 bush shops serving the Indians and the Negro gold diggers are maintained at Kokerite, Massawini, and Towakaima. (See map, Fig. 1.) They are forlorn little thatched shacks; the Kokerite and Massawini shops are owned by creole Portuguese, the Towakaima shop is owned by a Chinese. The Kokerite shop is in charge of an East Indian, the Massawini shop is under the direction of a Portuguese, the Towakaima shop (owned by Chee-a-Fat, a Chinese man of business whose base of operations is at Arakaka on the Barima) is operated by a Negro. Their stock, without exception, is small and confined to staples and trade goods, but they represent the only outposts of European civilization in the area.

291 511 Above the falls at Towakaima, however, there are no[1] shops, and at the time of my first visit, in December, 1932, only one or two prospectors. So the Indians of the upper Barama had no trade cloth for the making of sophisticated garments; women had no dresses, nor did the men have trousers. It is, therefore, the dress of these Indians which I shall describe, and it must be remembered that the description holds good for many individuals throughout the entire area, individuals who have not the means to procure the rudiments of European dress. Throughout the whole region the men usually use only a loin cloth for daily wear, even in cases where trousers or shirts are owned for "dressing up." The women, [797] on the other hand, having been instructed in Christian modesty by the good officers of the now defunct mission stations at St. Bede's and Kokerite, wear the European type of clothing more generally than the men. The dress, however, seems to be more an article of pride than a guardian of modesty. After becoming used to my presence the ladies did not hesitate to lay aside their dresses when doing heavy work which might tear or soil the garments. (See Plates 9, *b*-11, *a*, for different types of men's and women's clothing.)

The man's lap or loin cloth is called wokuru kamisharu. It is [928] almost always made of red cloth. Red appeals to the men's color sense, but also the Indians believe on the basis of experience that the red dye fades less quickly than other types. The strip of cloth is about eight inches wide and varies in length according to the size of the owner. A total length of forty inches is sufficient to allow pendant ends front and rear of a proper length on 291 531 a medium-sized man. Each end is decorated with a fringe of homespun cotton yarn called epururu (end thing) or sesururu (fuzzy thing). If beads are available a band of bead work may be worked into the fringe at its base. At each end of the cloth proper is usually a stripe of appliqué made of small bits of differently colored cloths sewn together and upon each other to form a pattern. These patterns (called piepaitu or piekono) have no extraneous significance at the present time. Usually the fringe on the end of the loin cloth which hangs down in back is carried up along each side of the cloth about two inches, thus distinguishing the front and the rear ends for the wearer.

291 The loin cloth is drawn between the legs and supported front

[1] [i.e., trading shops run by foreigners—Analyst]

291 and rear by a belt or girdle which is worn around the waist. The girdle (akondenano, anyone's girdle; akondu, girdle) is made of two cotton cords, each of which is made of four strands braided together. The two braided cords are joined together to a tie-string at either end, the two tie-strings being knotted together when the girdle is worn. A man usually wears two or more akondus. Like a belt, they rest at the sides of the body upon the eminences overlying the illiac crests, sagging downward front and rear so that the navel and the upper lumbar region are exposed. A longer piece of the loin cloth is allowed to hang in front than in back; the front piece is eighteen inches to two feet in length, the back pendant piece only a foot. When engaged in active work, a man usually tucks up the front end of the loin cloth into his girdle.

Women also wear a loin cloth (wori kamisharu tupuru), which when possible is made of blue cloth. It is usually undecorated, [531] bearing no fringe or appliqué. More rarely fringe and appliqué decorate the front end of the female loin cloth. The woman's loin cloth is shorter and slightly wider than the man's. Like the man's, it is initially passed between the legs and suspended from a girdle. In front, however, only a short wide piece hangs free, like a small apron, while the superfluous material at the rear, instead of being allowed to hang as a pendant end after being passed over the girdle, is brought back between the legs and tucked into the girdle in front, under the pendant apron-like strip which hangs down over the pelvic region. Thus the man's costume provides only a single covering of the pelvic organs, while the arrangement of the woman's loin cloth provides double protection in this region.

301 The woman's girdle (wori akondu kasu[illegible] woman-girdle-beads) 291 is composed of several strings of white china beads attached to 439 tie strings at either end, as in the case of the braided cords of the man's girdle. The number of strings of beads varies with the ability of the owner to procure them through trade channels. Good bead girdles are rare at the present time because, for some unknown reason, china beads are difficult to obtain in Georgetown and are consequently seldom imported into the bush by traders. In case a woman has no beads, she contents herself with a girdle of unbraided cotton cords. The loin cloth, as I have said, constitutes the only article of clothing for women in regions where trade goods are scarce. But because the women, wherever cloth, needles,

301 and thread are available, are assiduous if not highly accomplished
291 seamstresses, certain other items which are occasionally included
439 in the female wardrobe deserve mention.

291 The loin cloths of both sexes, and the girdles, are made by the
294 women. In addition they make the saiya and dresses. The saiya
177 looks like a sort of skirt gathered into a band around the top. Instead of being worn around the waist, the saiya is suspended over one shoulder around the neck, leaving the other shoulder bare. Dresses of several imported patterns are constructed by the women, most of them having knee-length skirts and being rather clumsily fitted. One which enjoys a wide popularity on the lower Barama employs the "trap-door" feature familiar to American connoisseurs of underwear for nursing mothers of a generation ago. Dress patterns and knowledge of needle work have been introduced to the Carib women from at least two sources. The missionaries, here as elsewhere unconsciously working hand in hand with the traders, considered it part of the Christian religion to encase the bodies of the women in garments which would adequately protect them from the gaze of men, and provided cloth and instruction to the women for this purpose. Secondly, during the 'heyday' of the lumber business, when the sawmill at the mouth of the river was flourishing, the proprietors of that establishment were required to tax their ingenuity to the utmost in importing constantly new types of trade goods with which to rouse the avidity of the Carib woodcutters and their wives. A Carib takes the sensible attitude that there is little point in working for someone else, once he has earned all that he desires. And since the simple desires of the Caribs could be satisfied with the proceeds of a few days' labor, it was necessary for the harassed sawmill operators, who were dependent upon Carib labor in their woodcutting operations, to stimulate new desires in the hearts of their employees. One of the results of this situation was the importation of cheap ready-made silk and cotton dresses, which immediately caught the eye of the women. Unhappily, the husbands were required, at the prevailing level of prices in the bush, to work long and earnestly to procure the garments, but the women got the dresses in the end. In the course of time the necessary patching and repairing on these gowns led the women to a familiarity with their construction, so that the more skillful seamstresses learned how to dupli-

cate them more or less accurately. All this took place a dozen 291
years ago, yet I was on many occasions shown the ragged remains 177
of these "shop dresses" together with the home-made copies 294
proudly exhibited for my critical judgment.

Babies and small children usually wear nothing at all. Some time before puberty both sexes don small loin cloths, usually bits of rag suspended between the legs from strings around the waist. (Plate 10, *a*.) The sexual differentiation in the manner of wearing the loin cloth, practised by the elders, is also recognized in the garb of the children. Near the mouth of the river several women have made dresses for their small daughters and romper suits for their little boys. The wife of Alec, my interpreter, whose home is at Kariako, is perhaps the outstanding matron in this respect.

The adult types of raiment are donned with the appearance of [881]
the physical changes accompanying puberty.

Ornament. A variety of ornaments made of cotton, beads, nut 301
shells, insect wings, and small animal bones are donned by both 237
sexes on special occasions. The men wear a long necklace called the kasuru kapuru, made of beads and cotton. It hangs down the back and at its end has a pendant tassel of beads or iridescent beetle wings. Men also wear a short plain necklace of cotton fringe, called moruren. The incisor teeth of leopards, wild hogs, and rats are especially prized for necklaces. They are strung on kraua cord to form short necklaces of the choker variety as well as longer types (Plate 12, *a*). If possible the teeth of only one animal are strung on a necklace, but this rule is not invariably followed. Pendants consisting of strings of seeds and cotton tufts are frequent (Plate 12, *b*). Wristlets are worn by the men; they are usually made of a woven band of homespun cotton with a fringe of china beads of various colors. In other cases they are woven
from nibi fiber, the material used for making basketry (yame (286)
akundenana, bead bracelet). Men frequently wear armlets just above the elbow; these ornaments (yapesepuru) are braided from nibi fiber to make a thin band about one quarter of an inch wide; in some cases small fiber rings are suspended from the armlet. A man frequently wears two or three yapesepuru on each arm; it is said that these bands steady the arm muscles of an archer. In the villages around the head of the Barama many of the men wear ligatures (tsepu) above and below the calf of the leg; such a

301 237 ligature is simply an unadorned cotton or kraua cord tied tightly around the leg. The Indians say that they prevent cramp. At dances the men often wear fillets of cotton fringe on their heads; these are composed of a thick cotton fringe tied onto a base of cotton cords so tightly that the whole thing assumes a roughly cylindrical shape about one inch in diameter; a sort of crown of fringe goes around the head, and from its back two cylindrical fringes, about a foot in length, dangle over the neck (Plate 11, *b*).

The women also wear necklaces of beads, bones, teeth. For instance, one observed at Sawari contained two ear bones of the rat (mombo tanaipyu), two crab claws (kawana yedi), and a ring made from the shell of an akuru nut, all strung together on cotton string. Gold glass beads obtained from the shops down river are in great favor for women's necklaces. Another observed at Sawari consisted of twenty-five large, gold glass beads, three beads of green glass skillfully chipped by the Indians from green bottle glass, a reddish ring made from the shell of the kokerite[1] nut (maripa epyupo), and four black rings made from the shell of the witi nut. Men do not wear glass beads. And it will be noted that the women's necklaces are more varied and "fancy" than the men's. A few older women were observed wearing anklets of woven homespun cotton; the band of cotton was about three inches wide and undecorated; this custom is said to be confined to the "old time people" and seems definitely to be passing out. Ligatures below the knee, worn by some women, are made of cotton woven into a band about an inch wide and are called tchesuru. In some cases these ligatures below the knee are made of strings of china beads woven together into a band. Women also wear arm bands of china beads above the elbow.

An ornament worn by both sexes is the sararapan; it consists of a long thick cotton cord hung around the neck over the right shoulder and suspending a tassel-like ornament on the left hip; the suspended ornament may consist of short strings of beads,
321 short strings of kiushi, and other seeds. Several examples of orna-
301 ments made from the shell of a river bivalve were observed; the shell is ground into a disc about one and one-quarter inches in diameter, perforated in the middle for suspension, and the brown

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[1] *Maximilliana regia.*

patina of the outer surface scraped off in places to produce a 321
brown-on-white design. 301

Women usually have a small perforation in the middle of the 304
lower integumental lip in which a common brass pin or a thorn is inserted with its point outward. The natives consider this practice more a matter of convenience than of ornamentation. The pin or thorn is removed for use whenever the owner needs a sharp point.

There is thus very little formalization in the pendants, neck- 751
laces, bracelets, armlets, fillets, and ligatures worn by the Caribs. So far as I was able to discover, none of these ornaments possess any extraneous significance which would indicate that they are regarded as fetishes or amulets.

In preparation for a dance or drinking spree both the men and
women sometimes decorate their foreheads with the white under- 527
down of the powis (Plates 11, *b* and 13, *a*). This ornamentation 619
has been described by Mr. A. Hyatt Verrill as the "Carib tribal 301
mark."[1] At the present time, this symbol is not used as a self-conscious designation of tribal membership by the Barama Caribs. It is worn only at sprees, at which times foreigners as a rule are absent, and at present can be considered functionally only as a type of festive ornamentation. Wild honey is spread on the forehead, and into this natural adhesive the white down feathers are stuck so that a thick fluff covers the forehead. Even its use at sprees is not invariable.

On festive occasions the women always paint their faces. 302
The onto fruit is made into a paste and colored red with ruku 386
(*Bixa orellana*). Different shades of red and black are made by adding lamp black to the paste, which is kept in a hollow section of dried bamboo and applied with the frayed end of a twig. Several
designs are in use. Informants consistently stated that, although (531)
these designs had religious significance in the past, they were purely decorative at present.

Both sexes sometimes decorate their hair with flowers and 302
feathers on festive occasions. The arrangement of these ornaments is quite casual, and their use is not an invariable part of the toilet.

Women usually wear their hair parted in the middle with either one or two braids hanging down the back. When the woman is at

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[1] Verrill, 1917, *Tribal Relationship of the Akawoias.*

302 work, she tucks up her braids into a knot on the back of her head.
515 Delousing is a favorite leisure-time activity of the women. Often
517 one will see a group of women sitting on the ground, in the shade
of the house, all facing in the same direction, each woman straddling
the hips of the one in front of her while she herself is deloused by
her friend behind her. The lice are cracked between the incisor
302 teeth of the searcher and spat out (Plate 13, *a*). Men and boys
wear their hair cropped close to the head, with the exception of a
fringe of "bangs" which hangs down over the forehead into the
eyes.

304 Although I measured and observed some hundred and twenty-
171 five adults below Towakaima, I found no tattooing on their skins.
In the settlements around the falls (Sineparu and Towakaima)
and those above the falls, I found tattooing on both men and
women. In all cases the decoration was confined to the inner surface of the forearm. I did not have the opportunity of seeing the
process, but informants were consistent in stating that wild honey
is the only substance introduced into the incisions. The skin is
cut with bottle glass (knives and cutlasses are too dull) or with
the point of a needle. In either case a continuous incision is made;
no tattooing is done by the puncture method. It is difficult to
304 understand how wild honey, dirty as it is, contains sufficient pigment, without being mixed with lamp black, to produce the blue
designs which result from tattooing. A woman may have a series
of long parallel lines running diagonally across the inner surface
[789] of her forearm. This is said to make the drink which she manufactures taste better. If this decoration appears on both arms, a
woman is said to be able to work the cassiri more easily. Some
informants stated that a woman could pass drink to a man only
with the arm which is tattooed, but I did not find this consistently
true in practise, even in the villages of the upper Barama. A
greater variety of figures appear in the men's tattooing, such as
crosses, circles, squares. Informants were unanimous in stating
304 that these designs had no magical or religious significance. How-
789 ever, a fortuitous type of tattooing connected with magic appears
on the arms of practically all men throughout the area: in preparing a bina, or hunting charm, a series of short transverse incisions
is made on the inner surface of the right forearm, over the brachioradialis muscle, and into these incisions the ashes, juice, or powder

304 789 made from the bina plant or animal is rubbed, as described in the section on religion. When these incisions heal, a series of short transverse blue lines remains.

SHELTERS AND THEIR FURNITURE

361 THE majority of settlements or villages are located at some distance from the river side. The only exceptions to this rule are those of Teki and Powis Hill, both of which were established on the river bank through the influence of gold prospectors who wished Indian labor in the vicinity of their operations, and Turingbang and Baramita on the upper reaches of the river, where it is not navigable. Other settlements range in distance from the river from half a mile, as in the case of Kariako, to an estimated fifteen miles, as in the case of Huri.

Although defense was possibly the major consideration leading to a secluded location of a village in former times, the requirements of the hunting and agricultural activities of the natives seem to be most important at present. Successful hunting requires a wide range of virgin forest on all sides, a territory in which the hunters are not handicapped by competition from neighboring villagers or passers-by on the river. Furthermore, it is the practice to locate [312] cassava fields on hills or slopes in order to facilitate drainage of the soil. Suitable facilities for natural drainage are most often found at some distance from the river.

The village is always located on or near the banks of a creek which provides the water used by the people. Access to the river is afforded by trails and paths through the jungle. (See section on the settlement of Sawari.)

342 361 In so far as a Carib orients his house at all, he endeavors to place it so that the long axis runs north and south, an arrangement which prevents the sunlight from entering the gable ends. This type of orientation, while frequent, is not universal, and if the house happens to be protected by the shade of trees, little attention is given to the matter. Other considerations affecting the choice of the site are privacy combined with ready accessibility to neighbors, convenience to water supply, and nearness to the field. Change of residence is not an uncommon thing in this region, due to such causes as the necessity of locating new fields

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and hunting grounds, or personal and social disagreements, so that the building of a house is looked upon as a chore which must be repeated several times during one's career. A man, if one may judge by the histories of the old men whom I knew, may build from three to a dozen houses during his lifetime.

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Before discussing the permanent residences which are located in settlements or villages, it may be well to mention the types of temporary shelter in the building of which the Carib woodsmen are so adept. As stated in our discussion of hunting, a man is sometimes away from home for several days, engaged in the chase. In other cases long trips overland or by river to neighboring settlements or trading posts necessitate the passing of nights in the jungle. Just as every man is a competent woodsman, knowing the practical uses to which any of the jungle plants can be put and the peculiarities of the animals which furnish so large a part of his food supply, so he is also well acquainted, by the time he reaches man's status, with many ingenious methods of making himself comfortable in any conditions which he may have to face. Other aspects of woodsmanship will be described in our chapter on transportation and woodcraft. But at this point we may say that a man traveling in the jungle always carries at least two accessories, his cutlass and his hammock. With these he can make himself reasonably comfortable for a night almost anywhere. The cutlass is carried in the hand, and the hammock is rolled into a small ball which is suspended down the back by a piece of bush rope around the neck, or is packed into a corner of the walisha (carrying basket).

If the night gives promise of being clear, or if the traveler is in a great hurry, the only arrangements made for sleeping are the cutting of two poles with sharpened ends, which are forced into the ground at a distance of perhaps six feet from each other. To these poles the hammock ropes are attached. The poles themselves lean at obtuse angles away from each other, the better to withstand the strain of the hammock. This method of passing the night is designated in pidgin English as "sleep in bush corner."

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Rain, however, is the constant visitant of all travelers in the bush, and it is exceedingly difficult to say with certainty that a sky which at evening is studded with stars will not be pouring water long before morning. Consequently, whenever practical, some provision is made for shelter from rain. The simplest form of

rain shelter is made merely by laying two poles against the trunk of a tree and spreading the leaves of the wild plantain or of dallibanna[1] over them. Under the small shelter thus made a man may crouch protected from the rain, but will be unable to sling his hammock. Another type of temporary rain shelter is made from the plaited leaf of the manicol palm, as figured in Roth.[2] 484 342

More commodious temporary shelters, called banabs by the creoles and wawnitopo (sleeping thing) by the Caribs, take several forms. All of them consist of a framework of upright poles and horizontal crosspieces, and a thatch or roofing of some kind of broad leaves. The framework serves the double purpose of supporting the hammock of the occupant and supporting the roof over his head. The framework is tied together with bush rope.[3]

Figure 3 shows different types of temporary shelter. The triangular flat-roofed type (Type A) of wawnitopo consists of three uprights, any or all of which may, if convenient, be the trunks of standing trees or saplings. At a height of about four to five feet from the ground, the uprights are connected by three horizontal tie-pieces, slender poles cut from young saplings. Across the triangle thus formed several horizontal tie-beams are laid parallel to its base. Upon these beams are laid the broad fresh leaves which have been gathered for the thatch, and from the uprights the hammock is slung. Usually the sleeper's feet are directed toward the [513] apex of the triangle which forms the roof, and his head toward the base.

A triangular shelter with a gable roof I have called Type B. The gable end is built up by a series of cross pieces laid parallel to each other upon the ends of the longitudinal stringers which support the thatch of the roof.

Rectangular shelters with gable ends are of two types. In the first type the gables are built in the same way as that described for the triangular gable-ended shelter. In the second type (Type C) the ridge pole is supported at either end in the forked top of an upright pole. The four corner uprights are supported by braces (see illustration), while at their tops they are bound together by horizontal poles which form four sides of a rectangular

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[1] *Geonoma baculifera.*

[2] Roth, 1924, *An Introductory Study of the Arts, Crafts, and Customs*, Plate 55.

[3] Bush rope is the creole term for any unprepared vegetable material which may be used as twine or rope. A variety of vines of several sizes abounds in the bush, as well as the barks of several trees which may be stripped into straps. Bush rope is therefore always available in the jungle, although represented by a number of botanical species and genera.

342 frame. To support the roof, a series of parallel rafter poles extends
335 from the ridge pole on each side to the longitudinal runners. These

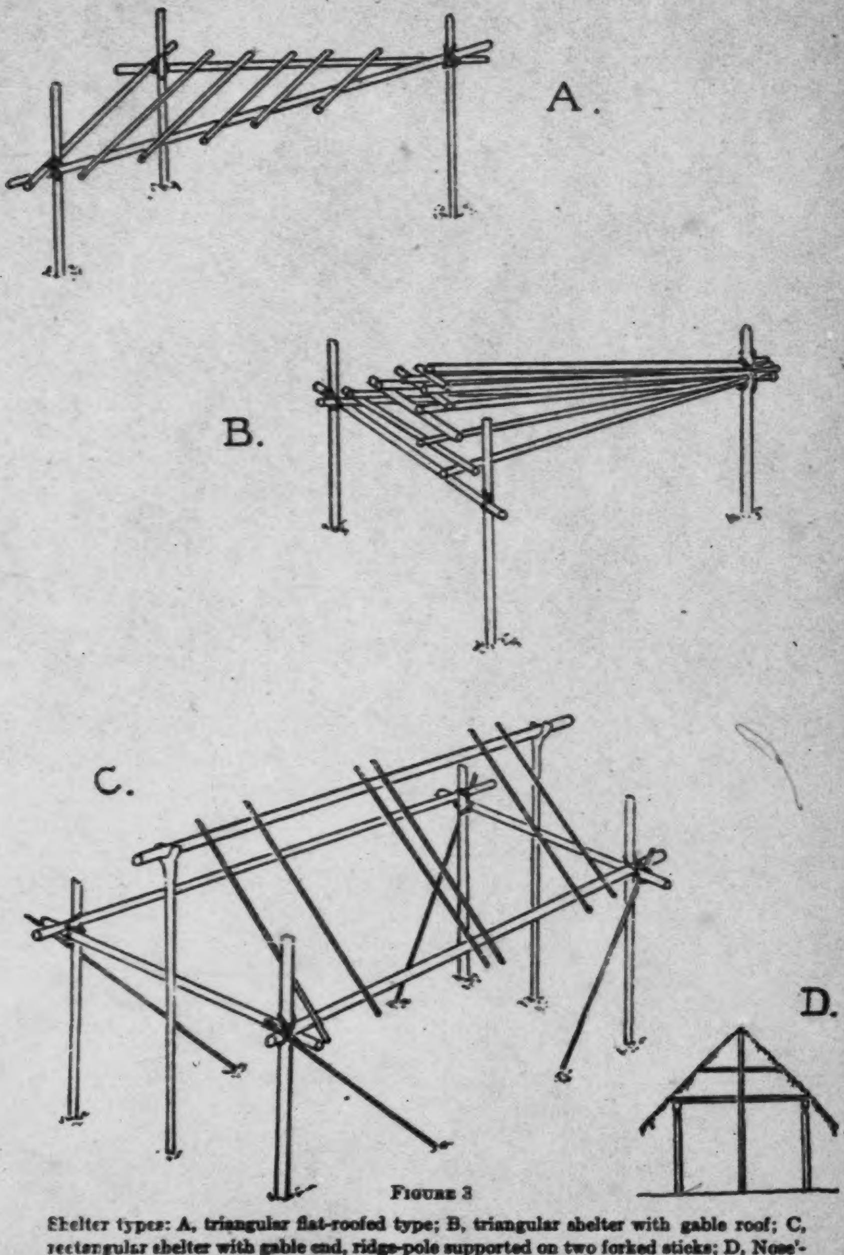

FIGURE 3

Shelter types: A, triangular flat-roofed type; B, triangular shelter with gable roof; C, rectangular shelter with gable end, ridge-pole supported on two forked sticks; D, Nose'noto, or steep-pitched, high-roofed type of house with high cross-struts.

484 rafters are in some cases further strengthened by longitudinal
342 stringers on the under side.

342 Let us now turn to an examination of the permanent dwellings
335 of the Caribs. The standard type of dwelling throughout the area from the head to the mouth of the river is a gabled-roofed thatched house without walls. Two varieties of this type occur, having four and six upright supports respectively. These I have termed the four (apototo) and six-pillar (miemboto) types.[1] The house, or owto, is built as follows. After a level site for the dwelling has been selected with due regard for privacy and convenience, the position of the pillars (wakapu) is determined by measuring out the ground plan with a pole on which the proper dimensions or fractions have been marked. The size of the house depends upon the number of persons living in it, the wealth of the owner, the amount of assistance he will have in building it, and the availability of materials in suitable quantities. For instance, in a region where roofing materials must be carried long distances, smaller houses will be built than where they are readily at hand. The holes to receive the pillars are started with a hoe and enlarged with a digging stick. When the hole has reached a depth of about six inches, the pillar, the inferior end of which has been sharpened to a point with the cutlass or axe, is introduced and "tomped" into place by repeatedly lifting it with the two hands and forcing it into the ground until it rests solidly with about a foot of its length below the surface of the ground. The earth is then filled around the pillar in the upper part of the hole and well stamped into place. Due care is taken that the upper ends of the pillars shall be of approximately equal height above the surface of the ground. The height of the pillars varies with the house, but averages between seven and eight feet. When a pillar is prepared, the bark is first removed from a log of wood of suitable length, the inferior end is sharpened as already mentioned, and the top flanged or whittled into a broad fork to receive the stringer or tie-beam (Plate 13, *b*). When the pillars are in place, the runners (apopono), one of which connects the tops of the pillars along each side of the house, are put in position. Usually they are not tied to the pillars but rely upon the flanges in the pillar tops and the weight from above to keep them in position. Next the tie-beams (tchurapa), which

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[1] At Piai and Turingbang settlements I found the houses of the settlements to be exclusively temporary shelters of the C type. The inhabitants said that the settlements had not been established sufficiently long to allow for the erection of permanent dwellings.

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transversely connect each pair of pillars, are laid in place with their ends lying on top of the runners, to which they are sometimes tied with bush rope. Then the ridge pole supports (owto returu) are placed in position. These supports are long poles of lesser diameter than the pillars; their inferior ends are sharpened to a point and forced into the ground to a depth of about a foot; their superior ends are provided with natural forks, in which the ridgepole rests; one ridge pole support is set in line with and midway between each pair of pillars and is tied with bush rope to approximately the middle of the tie-beam which connects the two pillars in question. Thus a four-pillar house has two ridge pole supports, a six pillar house three (Plate 14, *a*). The ridge pole (de'atu-lu tano) is next placed in the forks of the supports and tied to them with bush rope. The stage is now set for building the framework of the roof (roof: dioneru). First the wall-plates (asariaponi) are placed in position, resting on the ends of the tie-beams and firmly tied to the ends of these beams; there are two wall-plates, one for each side of the house, running longitudinally and connecting the ends of the several tie-beams. The wall-plates, as well as the ridge pole, are carried two or three feet beyond the pillars at each end of the house, in order to provide a foundation for the overhang of the roof. The wall-plates provide the lateral support for the rafters, whose medial support is the ridge pole. The rafters (iararu), as shown in the photographs, are slender poles of sufficient length to provide the foundation for wide eaves at the sides of the house, that is, from the ridge pole to within two or three feet from the ground. About three inches from the end of the rafter which lies over the ridge pole, a notch is cut to a depth of approximately one half the diameter of the rafter. When in position the ridge pole is received into this notch (Plate 15, *a*). The rafters are tied to the ridge pole in pairs, one on either side with the ends of each pair projecting over the ridge pole side by side. Each rafter is firmly tied to the wall-plate at the point where it crosses. When the rafters have been secured, the roof-binder, a slender pole equal in length to the ridge pole, is placed in position longitudinally above the ridge pole; the roof binder lies in the forks made by paired ends of the rafters as they project beyond the ridge pole (Plate 14, *b*). This arrangement provides extra stability for the ridge of the roof.

341 Finally, the medial runner (otondano) is placed in position. This
335 is a pole which runs the full length of the house in the median line and is firmly tied to each of the points where a tie-beam crosses a ridge pole support (Plate 14, *a*). When the house is completed, sticks (sura) are laid from the medial runner to the lateral runners under the eaves, thus making a sort of rack or loft on which articles can be stored.

Before describing the methods of thatching roofs, it may be well to consider several variants of the above method of making house frames. In one type of house the roof frame is held in position without the use of ridge pole supports. Stability is given at intervals by the use of transverse struts connecting the two members of a given set of rafters at a distance of about two feet below the ridge pole. Additional stability is afforded by the use of diagonal struts, tied to the under sides of the rafters. In building a roof of this kind, temporary ridge pole supports are used while the rafters, roof binder, and struts are secured in position (Plate 16, *b*).

The small four-pillar house is sometimes built without the use of wall-plates. In this type of construction it will be noted that the rafters rest directly upon the longitudinal runners, which in turn rest upon the transverse tie-beams. (In the standard design the tie-beams rest upon the runners.)

342 A number of different species of palm leaves are used for thatch-
824 ing the roofs of the houses. These include truli (*Manicaria saccifera*), ite (*Mauritia flexuosa*), dallibanna (*Geonoma baculifera*), kokerite (*Maximilliana regia*), manicol (*Euterpe edulis*), tura (*Oenocarpus bacaba*), and ballidanna (unidentified). These materials do not occur in equal quantities throughout the area, so that one village may be thatched with one combination, another with a different material. Inasmuch as Roth has described with great preciseness the sundry details regarding the making of the different types of thatches,[1] I shall content myself with a general description and the mention of a few points not covered by him.

All types of thatch are attached to the rafters with the help of stringers. These are frequently made of konapuri wood (a small tree which somewhat resembles kokerite in appearance). The stringers are tied to the rafters in a number of ways, as figured by Roth, by a continuous piece of nibi which runs the entire length

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[1] Roth, 1924, *An Introductory Study of the Arts, Crafts, and Customs*, pp. 265–270.

342 824 of the stringer. I also observed an additional method of tying stringers which differs slightly from those shown by Roth. The roof of a Carib house is covered with successively overlapping courses of thatch, each course of which is attached, as has been said, to a stringer which is in turn attached to the rafters. Thus, when roofing a house, one begins by laying a course of thatch the whole length of the roof at the eaves. Then another course is laid above so that its ends overlap the preceding course (Plate 16, *a* and *b*).

In the settlement of Sawari the thatch is composed of courses of ballidanna[1] (not to be confused with dallibanna) and manicol leaves. Two courses of manicol are followed by one course of ballidanna, which is followed by two courses of manicol, and so on. Figure 4 presents a sketch illustrating the manner in which the thatch is applied. The ballidanna course is made as follows: the stem (a) is inserted into the blade of the preceding leaf (c) to the left. (The stem of the first leaf of the course is bent back and inserted into its own blade.) Then the blade of the leaf is bent over the stringer (b) and brought down behind so that the blade of the preceding leaf overlaps the blade of the leaf just fixed. The manicol leaf is split lengthwise through the central rib, and one half is reversed so that the spears or subsidiary leaves of the one half cross those of the other half diagonally, as in the illustration (d). No stringer is used with the manicol, as the stiff central ribs of the leaves fulfill the function of stringers. Two courses of manicol are laid down, then one of ballidanna, then two of manicol. The manicol leaves cover the ballidanna leaves, so that as seen from the outside the latter are invisible as part of the thatch.

Occasionally, transverse sticks are attached at intervals directly below the ridge pole and project on either side through the thatch, serving to make the latter more stable under the attacks of the wind.

342 Usually a double capping course of manicol leaves covers the ridge of the roof.

Rarely, a large house is supplied with a fall-back or lean-to (asaru) at one end. This is composed of a section of thatched roof attached to a crossbeam (asaru apone) under the gable at one end of the house. The thatch is carried in the usual way on rafters (de' atulu akikatopo) which radiate from the asaru apone to a beam resting on two uprights at some distance beyond the end of the house proper. The roof of the fall-back is carried down to the level of the side eaves of the house (about two feet above the ground). Thus this unusual type of house-end successfully closes off one end of the house so that entrance is convenient from the other end only. At the same time a small triangular opening is left under the end of the gable, through which the air, although not the rain, may enter. 342

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[1] Dallibanna leaves are more or less rectangular, while ballidanna have the shape of a pointed oval; they are also somewhat smaller than dallibanna and have oilier surfaces.

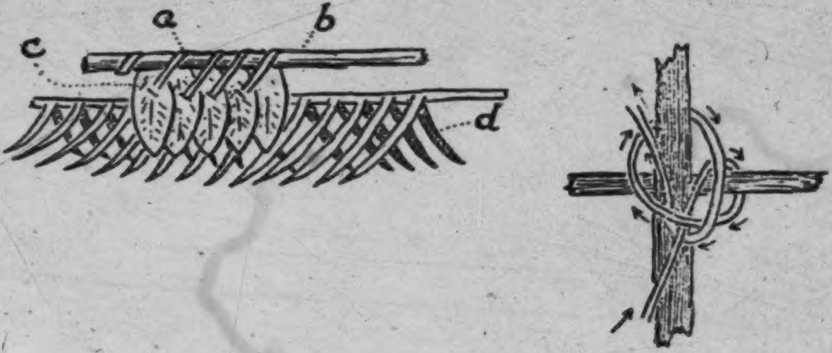

FIGURE 4

Thatch (left) and beam-tying (right) used at Sawari. In the drawing to the left, the various parts of the thatch are lettered as follows: the stem of the ballidana leaf (a), is bent over wooden stringer (b), and inserted into punctured blade of preceding leaf (c); manicol leaf split lengthwise through central rib, and subsidiary spears (d) reversed so as to cross each other.

Another variant in house construction is the steep pitched type known as nose'noto. The steep pitch of the roof produces a higher ridge pole and necessitates the use of cross struts to bind together the rafters (Fig. 3, Type D).

House furniture is comparatively simple and may be grouped 352 under the heads of hammocks, benches, and household utensils. Utensils and containers which are found about every house are described elsewhere.

All persons sleep in hammocks, which are slung from sturdier 513 parts of the house frame (tie-beams or runners). No covering is 354 used other than the hammock itself, which is wrapped around the body. A fire is kept burning near each hammock during the night, and it is necessary for someone to get up every two hours or so to

513 blow up the fire and put on fuel. The man often slings his hammock
354 directly under that of his wife, so that he can more easily rise to
521 tend the fire. Usually the people retire shortly after dark, but a
513 lively conversation ensues as they lie in their hammocks before
going to sleep. There is much shouting back and forth between the houses and a great deal of laughter. Most of the banter refers to incidents of the day with witty comments on the actions of certain individuals. One usually sleeps diagonally to the long axis of the hammock, as this enables the body to lie in a more nearly horizontal position than otherwise. In slinging the hammock, care must be taken that it describes a gentle curve when it hangs empty; too deep a curve does not enable the sleeper to stretch out in a horizontal position; too shallowly hung a hammock lacks the resiliency which makes for comfortable sleep, and at the same time, by placing unequal stress upon the leading strings, prevents the hammock from being moulded to the body of the occupant. It is obvious that the hammock is a well nigh perfect sleeping device in a tropical environment. It can be easily rolled up for carrying; it keeps the sleeper away from the dampness and the animal and insect pests on the ground; it provides its own springs and allows free circulation of air on all sides; it is easily washed and freed of pests.

352 Hammocks on the Barama are made in only one pattern, but
286 of two different materials. The cotton hammock is called maipure-
pai'ipyo nimyoko. The fibre hammock, amose nimyoku, is made from the inner bark fibre of the amose (hibiscus). The latter is used only when cotton yarn is unavailable. The hammock is made on a loom (Plate 21, *a*) which consists simply of two upright stakes set in the ground. The yarn used in making the hammock is wound into a ball. One end of the yarn is tied to the bottom of one of the stakes. The yarn is then unwound off the ball and stretched to the opposite stake, around which it is carried. It is then stretched back to the first stake and carried around it, and so on, until the continuous warp, stretched between the two stakes, is of the proper width and ready to receive the weft. The binding elements of the weft vary in number from four to eight, and are woven, by the twining method, transversely across the hammock, at intervals of about six inches, from one end of the warp to the other. The weft actually consists of two elements or two pieces of twine which are in turn made up of two or more cotton yarns. In the weaving or twining,

352 286 the wefts are woven in pairs from the lower to the upper side of the warp as it stands on the loom. That is to say, one weft element is passed under the lowest pair of warps, the other weft element over the same pair of warps. The two weft elements are then twined around each other before the process is repeated on the next higher pair of warps, and so on. At the sides of the completed hammock the two weft twines are tied together over the last pair of warps. When the net of the hammock has been thus completed, it is removed from the loom stakes, and the leading strings are attached to the loops formed by the ends of the warp. The leading strings are of heavier cotton twine, attached to heavy cotton-rope or bush-rope, and radiating from the latter to the loops of the warp to which they are tied. The comfort of the sleeper who uses the hammock depends upon the skill with which the leading strings are attached. When a person is lying in the hammock, each leading string must be drawn to an approximately equal tautness; otherwise, ridges of strain develop in the net of the hammock which not only interfere with the free movement of the body of the sleeper but also with comfort.

352 Only two generalized forms of seating device or bench were observed. Although I was informed that formerly the natives had possessed stools carved into rough representations of animals, and pictures were drawn of this type of furniture by two of my informants, no examples of these more elaborate types were discovered. Many of the houses are provided with long benches. A long bench is simply a barkless log laid on the ground along one side of the house, next to the bases of the supporting pillars; the upper side of the log has been trimmed flat with an axe. On these perches a large number of guests can be accommodated.

The other type of bench is that illustrated in Plate 18, *a*. As can be seen, such a bench is made from one piece of wood, the under part of which has been roughly worked out to provide four wide feet, whose long axes are parallel to the long axes of the bench itself. The upper surface of the article approximates flatness and is soon worn smooth by repeated contact of many buttocks. The early stages of this natural polishing process, as I and most natives have discovered to their sorrow, are not devoid of hazards occasioned by the numerous splinters remaining after the bench is first hacked into shape.

354 The fireplaces are important parts of every house, not from the structural point of view, but because they are the centers around which food is partaken and from which warmth radiates to protect the blanketless Caribs from the sudden chill of the jungle nights. No particular construction is necessary for the fireplace, although one spot is usually selected for the fire, on which the cooking is done. The pots are set directly upon the coals and are supported by the surrounding fire wood. The cassava pan, on the other hand, is supported on rough stones at a height of from four to eight inches above the coals. At night several supplementary fires may be kindled in various parts of the house to warm various hammocks. Figure 5 shows a diagrammatic representation of the nighttime arrangement of a medium sized house. An important [412] accessory of the fire is the fan, which incidently is seldom used for cooling the skin. In a settlement a fire practically never has to be started from scratch, because somewhere among the houses is usually one which has not been allowed to go out. To insure the continuance of the fire during absence of the occupants from the house, large logs are usually left radiating from the embers so that their ends retain living coals for a long time after the flame has [313] died down. Konta wood is considered good as a fire-holder. In starting a new fire from embers, fine splinters of dry wood are heaped in a conical pile over the embers and brought to a flame by blowing with the mouth or by fanning. The Indians are adept at securing dry or resinous kindling wood, even in a heavy rain. The wettest looking piece of wood in the jungle, if it is solid, can be trimmed down to its dry core, which can be shaved into kindling.

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177 When confronted with the necessity of starting an entirely new fire, the Carib usually relies, in these days, upon one of the following methods: matches, gunpowder and cartridge caps, or iron and flint. Safety matches may be bought at the trading posts at the standard price of ten cents for a one-cent box, and those natives who have any contact at all with the shops usually have at least one box of matches stored somewhere about the house, carefully protected from cold and damp. Naturally, these conveniences of white civilization are used only with the greatest parsimony. In emergencies, a man with ammunition can start a fire by exploding a cartridge cap into a small pinch of gun powder. Many of the men possess strike-a-light outfits consisting of a piece of flint and

a bit of old iron. The spark is struck into dry moss carried with 372
the outfit in a small basketry wallet. Several of my informants 177

[342]

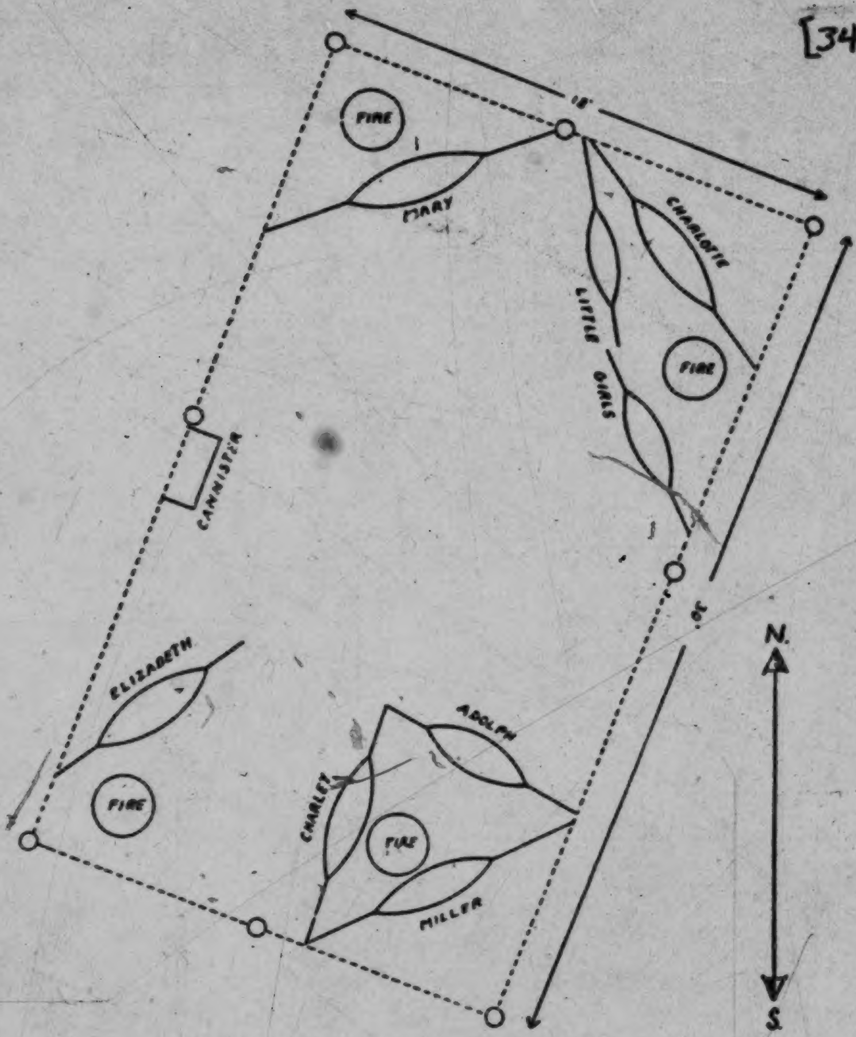
18'
FIRE
MARY
CHARLOTTE
LITTLE GIRLS
FIRE
CANNISTER
30'
ELIZABETH
FIRE
ADOLPH
CHARLEY
FIRE
MILLER
N.
S.

FIGURE 5
Plan of the interior of house at Sawari during the night.

claimed the ability to make fire by rubbing two sticks of wood together, but in none of their repeated trials did they succeed. This method is apparently very seldom used now.

354 A sort of lamp or taper is sometimes made of beeswax and cotton. (Lamp, kororeta; beeswax, wawapone.) Yarn is taken from a discarded cotton hammock and made into a coil, which is encased in melted beeswax. The yarn serves as a wick.

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[251] An adjunct of the house furniture is the drying rack (Carib, aripapone; creole, babracote). On the drying rack, meat is smoked over the fire. Drying racks are also erected outside the house for the purpose of airing and sun-drying cassava bread, split squashes, peppers, and other food. Only two of the patterns mentioned by Roth occur in the Barama country.[1] The three-stick type (Plate 18, *b*) is made with three sticks stuck into the ground like a tripod, with their tops tied together; about halfway from the ground they support a horizontal frame or rack. The four-upright type is a rectangular horizontal frame or grill supported on four upright forked sticks (Plate 13, *a*). The drying racks may vary in height and size and, as stated, may be situated inside or outside the house. Their several parts are tied together with bush-rope.

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[341] As illustrated in the description and plan of the village of Sawari (Figs. 9–12), various subsidiary buildings and out-houses may be associated with the family dwelling. These serve the purposes of kitchen, storehouses, or drink houses, as the case may be. They are always four-pillar types of less elaborate construction than the dwelling itself, although the design may vary from one of the temporary benab types to the simpler forms of house design, usually without wall plates. Sometimes such a subsidiary house is a former dwelling converted into an outhouse when a newer and more elaborate dwelling is constructed. A structure to which every family aspires is a drink house (kanu'eti). Such a building
[415] shelters the kanu, or cassiri barrel, a large trough hollowed out of a single log, in which the drink is allowed to "set," and from which it is served at sprees. Families unfortunate enough not to possess a kanu use large pottery jars for holding the drink. In this case the jars are kept in the dwelling house, no special structure being necessary.

231
136 Numerous wild animals are regularly kept about the house as pets. Among the most important of these is the warakabra, a fowl with the iridescent plumage of a peacock and the abbreviated rump of a guinea hen; these birds set up a warning scream upon

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[1] Roth, 1924, *An Introductory Study of the Arts, Crafts, and Customs*, pp. 276–277.

the approach of reptiles. Parrots (kurewako) are frequent tenants 231
of the houses; one of these birds at Sawari could speak several 136
Carib phrases and realistically imitated the whining of a dog and
the moans of a woman in sexual embrace, much to the amusement [522]
of the men. Corn birds (awashiwini), resembling in size and plumage the common American black bird, are taught to perch upon their owners' hands and necks, and are frequently to be found fluttering about the floors of the houses; at Sawari, one woman regularly on rainless days placed just outside her house a shallow dish full of water where the corn bird would come to bathe, fluttering and preening itself, and not at all abashed by the presence of people. Mention has already been made of the treatment accorded to hunting dogs. Care is also taken to provide for the comfort of the bitches when littering; one afternoon in Miller's house at Sawari, the whole family assisted for several hours at the accouchement of a bitch; a walisha lined with leaves was placed on a shallow depression in the floor; the children looked on and assisted the dog to be comfortable during the process of parturition. The Spanish cadouri is a small black and white bird (pipishi) about the size of a sparrow, greatly prized for its friendly ways. These birds are regularly fed on crumbs of cassava bread. Chickens (korotoko) are present at most of the settlements; they all appear to be a mongrel black and white fighting breed, and have probably been
introduced from Venezuela in fairly recent times; neither the eggs [177]
nor the flesh of these fowls is eaten; nor do the Indians show any interest in cock-fighting; the chickens are kept simply as luxury pets, and much time is spent in admiring and boasting of the form, color, and feathering of the birds. Young bush hogs (abuya) are occasionally kept as pets and eaten when they attain maturity; in several cases I found them tied to the house posts with bush-rope, "because they bite people." Toucans (kwiaking) are favorite pets. The kibihi is a small furry animal, somewhat resembling a racoon, often found as a pet around Carib houses. Pet monkeys of several small species frequently inhabit the trees about the house, coming down to be fed by the human beings.

Brooms of brush are used for sweeping out the floors of the 356
houses, although, regrettably, this function is performed too in- [412]
frequently to suit the tastes of a European. Garbage and refuse
are carried into the bush near the settlement, where they are 364

364 quickly cleared away by insects. As a matter of fact, decaying organic matter about a settlement is not as much of a problem as might be expected, since any such rubbage is quickly disposed of by the swarms of ants which appear from nowhere as if for this very purpose.

514 Each household has its own latrine in the bush near the house. A tree is cut down, on which one squats. Personal cleaning is done with a stick. Men urinate in a standing position, women squatting. The functions of elimination are performed in strict privacy except at sprees when people are drunk.

For a general picture of a Carib village and the relative economic status of its inhabitants as shown by possessions kept in their houses, the reader is referred to our discussion of the village of Sawari.

CONTAINERS FOR LIQUIDS

415 In this chapter we shall devote ourself to a brief survey of the several types of vessels used by the Caribs which are capable of holding liquids. Basketry is described elsewhere.

317 **Pottery.**[1] Clay for the making of pottery is obtained in a variety of locations. The best clay is found, however, in the beds of creeks, near their upper reaches, where the force of the water has not been sufficient to overlay the material with deposits of stone and rubble.

323 [462] The making of pottery is woman's work, and the women seek the supplies of clay when it is needed. No special time of year or month is necessarily reserved for this purpose, although the dry season is most auspicious because at that time it is more convenient to go into the bush in search of supplies, and also the drying of the clay and baking of the pots can be more dextrously handled. Furthermore, during high water the beds of clay are frequently submerged. The clay is dug moist and brought back to the house in walishas. It is usually deposited on the rack or loft and allowed to dry, a process which may require a couple of weeks.

[412] When it is dry the clay is pounded into a powder with a wooden club. Apparently, natural ingredients are relied upon for temper-

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[1] tumai'ini, pottery making; arinyo, pottery clay.

323 ing, inasmuch as no tempering material is added to the pulverized clay. On the other hand, a woman seeking a new source of supply may have to experiment with clays from several different spots before she finds one which does not crack in firing. Consequently, once a suitable clay has been found, the deposit from which it is obtained is worked repeatedly as long as the family lives within a convenient distance of it. Sometimes such a deposit is located as far as a day's distance from the settlement by trail or canoe. When the clay has been pulverized it is again mixed with water and kneaded with the hands.

A flat piece of wood serves as the tournette on which the pot is built. A biscuit of clay is made to start the base; if the base of the vessel is to be flat, this is worked into a discoid shape; if the pot is to have a pointed bottom, the clay biscuit serves as the base without being flattened into a disc. The base of a pointed-bottomed vessel is usually retouched after the vessel is completed, in order to remove the flat surface impressed by the contact of the tournette.

The body of the pot is built up with concentric, not spiral, rolls of clay. There is little that is unusual in the way these strips are applied. At the start, a low rim is made around the edge of the base of clay and is corrugated by pinching with the fingers. A ring of clay is then fitted at a bevel to this rim, overlapping it on the inside. The surfaces are smoothed inside and outside with the fingers and a small piece of calabash shell. This whole process is repeated as the walls of the pot rise. In the original smoothing, the lines of juncture are not completely eliminated, so that the pot, when its walls are complete, is again carefully smoothed with the convex side of a piece of calabash shell. In all of these processes the woman keeps her hands and the clay properly moist by frequently dipping her fingers into a small bowl of water which rests on the ground beside her.

When the form of the pot has been completed it is put aside in a corner of the house, where it is protected from rain, children, and pet animals. For several days it is allowed to dry. Then it is
[824] burned upside down over a fire of wepipyo bark. Actually the pot is placed bottom up with its weight resting on the rim, and the fire of burning bark is piled around and over it. It is burned until the fuel, the quantity of which is regulated by the experience of the potter, is finished. Sometimes the pot cracks in firing, "because it

323 has not been well dried." The proper amount of fuel must be judged at the start of the firing process. Further fuel cannot be added during the firing, as this also is said to cause the pot to crack, presumably because it interferes with the gradual rise and fall of temperature which is necessary to prevent sudden expansion and contraction.

[324] After the pot is cold, aporokune juice (unidentified) is applied inside and out. The juice, or gum, is applied raw with the hand. Then the pot is again mildly heated, and the gum is melted and can be observed running over it and seeping into the pores. It is said that if the gum is not applied, the pot soaks water and breaks. The aporokune gum gives a varnished or glazed appearance to a new pot. With use, however, the sheen disappears. For glazing, the juice of the inside bark of the tree is used, but for painting decorative designs, the juice of the outer bark is used.

323
531 Crude unformalized designs may be painted on the pot over the glaze. Whether or not a pot is painted depends upon the pride which the potter takes in her work. For this purpose, as already stated, the juice of the outside bark of the aporokune is used. It is made thick, and colored by mixing with lamp black. No other pigment is used. Different shades of brown may be produced in this manner. Clay of white, red, or gray color occurs in different vicinities throughout the area. The variety of clay color, combined with the painted designs, provides a limited diversity of decoration.

Occasionally a band of criss-cross or herring-bone decorative incisions is made around the pot a few inches from the lip. I saw no specimens in which this type of decoration took any other form. The Caribs use no other methods of decoration on their pottery than those already mentioned.

[286] Sometimes the pot is enclosed in a net of nibi plaiting, which fits closely to the surface of the vessel, and provides attachments for hanging the pot.

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415 Plate 19, *a*, shows the various types of pots made by the Barama Caribs. These patterns may vary in size but remain essentially the same in outline. The tumai'ene (No. 1)[1] is the "buck pot," in which meat and that savory mess called pepper pot are cooked over the fire. The tuku'arimi (No. 2) is a sort of flask, always

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[1] Read from left to right in Plate 19, *a*.

rather small, in which cassarip is kept. The pyotomene (No. 3) is used as a mixing bowl. The karupu (No. 4) is a handy container for all liquids which are being used in household processes, such as the water used in pottery making, the cane juice used in mixing cassiri, etc. Nos. 5 and 6 are variants of the tumai'ene type; the small tansepake tumai'eneme (No. 5) is frequently used as a container for crushed peppers. The tukuwari (No. 7) is the large jug in which cassiri and other drinks are set to ferment when they are made in small quantities or when the family does not have the use of a wooden cassiri barrel. The tuliwa (No. 8) is used for boiling any large mess; practically speaking, its most usual use is for boiling the mash of the various kinds of alcoholic drinks preparatory to setting them for fermentation. The uses of these several kinds of pots are further illustrated in the other photographs of Carib house life. 323 415

Calabashes. The several types of calabash vessels are illustrated in Plate 19, *b*. Generally speaking, these vessels are used for two purposes, drinking and storage of liquids. The open, semi-spherical types are used as drinking mugs. The closed types, with small holes cut in the shoulders or necks, are used as containers for drinking water and other liquids. Calabashes having long necks are sometimes carried on the trail as water flasks, in which case a small hole is bored through the upper part of the neck, through which a cord is passed. The carrying of water on the trail is infrequent, however, because creeks are fairly numerous in the bush. 415

In preparing the calabash vessels, the fruit or gourd is picked when completely ripe, the shell cut to suit the purpose to which it is to be put, and the pap removed. The gourd is sometimes boiled whole to loosen the pap. It is then dried in the sun or about the house until it is tough and hard. Aporokune juice is sometimes applied to the exterior, but I observed no examples of painting or other decoration. [531]

In covering the mouth of either a calabash or a pottery jug, old rags may be used, or one pot may be turned upside down over the mouth of another. These methods prevent the entrance of insects, a purpose which is also accomplished by placing a thick layer of fresh clean grass over the mouth of the vessel. To stop the mouth of a flask which is being carried on the trail, a tight bunch of grass is firmly wedged into the opening.

415 177 **Imported Containers.** In many of the villages which maintain contact with the trading posts, European utensils and containers are to be found. The "sauce pan," a small tin pail of about one quart capacity, with a lid, is issued as part of their regular equipment to wood cutters and other laborers who are employed by outsiders operating in the area. An enameled metal plate is similarly issued. Consequently, these utensils are to be found in households where the men have worked for outsiders.

The Caribs use no eating utensils of their own, but some families have obtained metal spoons in trade from the shops.

415 322 **Drink Barrel.** Every household aspires to the ownership of a kanu, which is illustrated in Plate 20, *b*. The kanu is used as a reservoir in which alcoholic drinks are fermented and from which they are served. The specimen illustrated has a capacity of about forty gallons. It is made from sorodani wood, the same which is popular for the making of korials. As can be seen, the vessel is made from one large log of wood, which has been hollowed out, and which has a pointed projection at each end. The excavating of the interior is accomplished by the same methods used in making korials. A depression is first hacked with an axe. This depression is then filled with hot coals from a fire, which are fanned so that they will char the wood as deeply as possible. Then the charred wood is removed with axe, knife, or cutlass, and the process repeated until a cavity of the proper size has been made. The [532] projections at the ends, which are exactly similar in form, are said to represent the head and tail, respectively, of the armadillo. The kanu, when filled with beverage, is covered by a piece of bark which protects the contents from insects and dirt. The whole [348] thing is kept in a specially constructed building, the kanu'eti.

Bamboo Containers. Only one type of bamboo container is used by the Caribs at present, an unguent pot in which is kept the face paint. These vessels are simply tubes of bamboo; the upper end is cut off below a node, leaving the container open at this end; the lower end is also cut off below a node, so that the septum of the node serves as the bottom of the container. On several speci- [532] mens crude designs are scratched in the outer cortex of the bamboo, and on one of these was observed the only attempt to portray the human form in line which I discovered on the Barama.

BASKETRY AND PLAITING

285 462 ALL basketry and plaiting is done by the men, and it is perhaps in this department of material culture that the most aesthetically pleasing products of Carib handiwork are produced.

314 824 Nibi, a slender bush-rope, and mokru, a reed-like plant which grows in the jungle, provide the principal materials for basketry and plaiting. Nibi (*Carludovica*) is a vine about as large in diameter
285 as a lead pencil. For use in plaiting it is first split in half; then the convex outer surface is split off from each piece, producing a flat, ribbon-like strip, which is at the same time pliable and tough. This strip is then scraped with a knife. The preparation of the mokru (*Ischnosiphon* sp.) is not unlike that described by Roth.[1]

285 412 415 Articles made of basketry or plait-work are the following: fans, sifters for cassava meal (Plate 8, *a*), trays (Plate 22, *b*), cassava squeezers, (Plate 9, *a*) walishas or carrying baskets (Plate 22, *a*), wallets (Plate 9, *a*), pegalls or clothing containers, quakes or general utility openwork baskets. Fiber trusses are also sometimes attached to pots to facilitate their handling.

285 531 Fans are of the design and type of manufacture illustrated and described by Roth.[2] Sifters are usually of the type figured by Roth.[3] The simple diagonal design is produced by twilled weaving. Also a twilled design is produced giving the effect of a series of concentric squares with their corners pointing toward the middle of each side of the sifter. This type is known as the "turtle-back" design, the squares resembling the markings on the shell of the bush turtle. Other designs are produced by using artificially colored elements in the weaving, usually red and black. The entire surface of the sifter may be divided into four quarters by a cross of red or of black. Another design consists of a series of evenly spaced red dots over the entire surface, produced by the use of a red element. The weaving technique used in all cases is twill. The framework of the sifter is usually of yarriyarri. The basketry is attached to the frame as in Roth (Plate 21, *b*).[4]

415 285 531 Trays are used mainly as containers for raw cotton which is being spun. Occasionally cassava meal and other loose articles

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[1] Roth, 1924, *An Introductory Study of the Arts, Crafts, and Customs*, p. 137.
[2] Roth, 1924, *An Introductory Study of the Arts, Crafts, and Customs*, p. 296.
[3] Roth, 1924, *An Introductory Study of the Arts, Crafts, and Customs*, Plate 71, A.
[4] Roth, 1924, *An Introductory Study of the Arts, Crafts, and Customs*, Plate 70, B.

285 are kept in them. They are all of the square variety with rims
531 and rail edging, as figured in Roth.[1] Twilled weaving is used, and
415 aside from designs in one color, designs are also produced by using
elements which expose the outer or brown surface alternately with those which expose the inner or light surface. The rim of the tray usually extends below the bottom of the container, serving thus as a rest which elevates the contents above the ground. In some cases wooden legs are attached at each of the four corners.

The cassava squeezer is manufactured in the manner described by Roth.[2] Two types of design are used on the tube, illustrated in Plate 9, *a*. The two examples at the right bear the kushi-ant design and suggest lines of these insects as they are sometimes observed on the trunks of trees. The specimen at the left in the illustration is the akuri-tooth design, the repetition of the two short parallel motifs suggesting the two upper incisor teeth of that animal. The dark elements of these designs are produced by weaving elements, the outer, or unscraped, sides of which are exposed.

The walisha or carrying basket is of two types, permanent and temporary. The permanent type resembles that figured by Roth,[3] composed of doubled hexagonal wickerwork on a rectangular wooden frame. The temporary type is constructed of bush-rope
415 on an oval hoop of wood, and can be made in haste by a traveller
285 in the bush. Both types are supplied with shoulder straps of
482 bush-rope and a forehead strap of the same material. Loads of
eighty pounds can be carried in these pack baskets. The load is placed in the basket and covered with broad banana or plantain leaves to protect it from rain. Then the two sides of the basket are laced together with bush-rope, as closely as possible, along the sides and top, to prevent the load from becoming dislodged. When the load is set down on the trail the projecting inferior ends of the two upright sticks of the frame keep the bottom off the ground, and the entire pack is leaned against a stick stuck into the ground.

Wallets are used for carrying small personal belongings, such as tobacco or beads. I did not see the process of manufacture of any of these articles.

415 Pegalls are square baskets made in two halves, one of which
285 telescopes into the other. They are made in the manner described

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[1] Roth, 1924, *An Introductory Study of the Arts, Crafts, and Customs*, Plate 97, B.
[2] Roth, 1924, *An Introductory Study of the Arts, Crafts, and Customs*, pp. 282–286.
[3] Roth, 1924, *An Introductory Study of the Arts, Crafts, and Customs*, Plate 118, F.

by Roth,[1] although the design in the weaving is confined to square 415
and rectangular figures produced by twilled technique. They are 285
used for storing clothing and personal effects, and are usually kept closed by a cord which is tied securely around both halves.

A variety of quakes, or general utility baskets (kuru kuru), are in use. They are practically all open wickerwork of the hexagonal pattern, without decoration (Plate 22, *a*). They all have hexagon bases, and the details of their construction may be obtained in Roth.[2] Occasionally these baskets are provided with handles. They are for the most part used for storing cassava and other [251]
vegetable products.

No other basketry or plaited articles than those described above were observed on the Barama. Fish traps and basketry water bottles, found in other parts of the colony, are not in use here.

Feather-working. This is not one of the arts of the Barama 237
Caribs. Feathers are used on arrows, they are stuck in the hair 287
occasionally as decoration, tufts of feathers may be used in making decorative pendants, and tufts of white powis down are sometimes stuck with honey to the forehead as decoration, but elaborate headdresses, armlets, and so forth, made of feathers, are not to be found in this region.

TRANSPORTATION

THE Caribs have no beasts of burden or wheeled vehicles, so that 482
all transportation depends in the last analysis upon the strength and endurance of the human body.

Land Transport. On land all goods to be transported must be 487
carried on human backs. Radiating from each settlement are a 361
number of trails leading off into the bush, which are followed by men when hunting. Below the falls at Towakaima, the connection between different settlements is usually made by river. The village may be located from one to fifteen miles back from the river by trail, but to reach a neighboring settlement, it is necessary to take the path to the riverside and proceed by canoe to the landing place of the settlement which is to be visited. The three Kariako settlements and Parapimai are connected by trail, as are

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[1] Roth, 1924, *An Introductory Study of the Arts, Crafts, and Customs*, p. 345.
[2] Roth, 1924, *An Introductory Study of the Arts, Crafts, and Customs*, p. 322, ff.

487 Towakaima and Massawini, but these are exceptions on the lower
361 Barama. Usually, however, each village has more than one trail to the river, perhaps a survival of a more warlike period when alternative means of escape were required in times of attack. On the upper Barama, where the river is less navigable than below the falls, all the settlements are connected by trail, and most of the traveling is done overland.

A trail is, after all, only a convenience which is not absolutely
487 necessary to a Carib and, when traveling lightly loaded, a man does
[823] not hesitate to "walk the raw bush" if there is a possibility thereby of saving time. And it is as a result of these raw bush walks that most of the trails are established. The ability of a native to find his way in the unmarked forest is truly astounding to a foreigner, who, until he has become accustomed to jungle conditions, loses all sense of direction once he finds himself surrounded by trees and thick undergrowth which frequently shut out even a view of the sun's position. The river is, however, the lode star of the traveling Carib and, as long as he knows his position in reference to it, he does not lose his bearings. It is believed that moss on the tree trunks invariably grows on the side of the tree which is nearest the river, and I have had this fact pointed out to me many times. Also, men are familiar with the general position of the creeks which flow into the river along the course which they are taking, even if they have never seen the creeks themselves; so that once a creek is reached, one usually knows one's approximate whereabouts. If a man is lost he will keep on until he reaches the next creek, follow it to the river, and then follow the river to a point which is familiar. As a man walks the bush, however, he takes precautions to mark his trail so that he may back-track, if necessary. As has been said before, a cutlass is always carried by individuals when in the bush. As one goes along one hacks the tops of the saplings at practically every step, so that the tops fall over in the direction which one is taking. With the left hand, twigs and saplings are broken and bent over in the same manner. A mutilation of this kind is practically never produced by natural causes, so that a bent or hacked sapling top immediately announces to a traveller that a human being has passed there. Also, the trunks of the trees are slashed with the cutlass as one goes along, leaving gashes in the bark which can be easily identified as trail blazes.

This hacking and bending and slashing of the surrounding vegetation becomes unconscious, and natives usually continue the practise unthinkingly even when travelling on a well marked trail. If another man later follows a trail thus blazed, he cuts and slashes as he goes along, thus opening the pathway, and is followed by others doing the same until a trail which has come into general use, such as that from Towakaima to Kurewa, is a well worn footway averaging about two feet in width through the undergrowth. 487

A number of signs are used to inform members of the party following at a distance of the movements of the advance section. Thus, when a branching of the trails is met, the leader cuts a fresh sapling so that it falls across the branch of the path which he is not taking. The followers then know that they are to take the open path. Another method is to set up a cross or a pointer which is made of an upright stick set in the ground at the meeting of two paths. The upper part of the stick is split, and into the fork is set a transverse splinter pointing in the direction which is to be followed. In addition, followers look for freshly broken saplings and freshly slashed tree trunks along the path. When approaching a settlement, strangers always stop at the edge of the house clearing and strike loudly with their cutlasses on the base of a mora tree. The mora has a trunk which gives forth a resounding boom when struck, and thus announces the advent of strangers to the residents. The visitors wait until some person in authority has bid them enter. On coming into a strange settlement it is bad form to look about until one has been properly welcomed by the host. The eyes are kept on the ground until one has had a drink of cassiri and a smoke. When leaving, it is bad luck to look back or to return for something forgotten. 576

The Caribs wear no foot covering, a usage which enables them to maintain a footing in places where it is often difficult for a shod traveller to keep his balance. In the deep forest the trails are usually wet, due to the frequent rains and lack of sunlight amid the foliage. The surface underfoot is covered with slime and soaked leaves, the bushes and trees which hang over the trail continually drip moisture, slippery roots of trees twine across the trail, and logs and fallen limbs must be continually climbed over or crawled under. Advantage is taken of all fallen logs which lie in the direc- 481

481 tion of the line of march, and it is not infrequent for a trail to be carried for several hundred yards from one fallen log to another (Plate 26, *a*). Shallow streams are usually waded, but deeper streams and the river are more often crossed on logs which have fallen across the water.

482 Loads are generally carried in the walishas, or carrying baskets,
which have been described in our chapter on basketry. The
hammock and a few cakes of cassava bread are tucked into a
corner of the walisha, and armed with his cutlass and bow or gun
a man is ready for a journey of almost any length with a good
484 load on his back. A party must of course always travel single file,
and the eyes must be kept on the ground, in order to watch the
[825] footing and to beware of snakes and dangerous insects. If a snake
is met on the trail, and this is a frequent occurrence since the reptiles apparently enjoy sunning themselves in the spots of sunlight, which are more often found on the trail, one cuts a long stick, and with it throws the snake into the bush without killing it. It is considered dangerous to slash the snake's head off with the cutlass, because, it is said, the severed head frequently flies off and fastens its jaws into an arm or a leg with unhappy results.

[562] A man going on a long journey usually prefers to take his wife and children with him. In such a case each one of the travelers, except children in arms, carries a load. I, however, saw no cases of the celebrated Indian custom which decrees that the wife shall carry all the load while the husband stalks majestically, unhampered, in the van.

[825] The Indians are admirable trackers, both of animals and humans. On many occasions I have verified the uncanny ability of the natives to ascertain from footprints, which to me were hardly visible, the species of animal which had passed by, and often the individual human beings. The Indians make a close study of people's feet, and can often tell by examining the foot prints who has passed over a trail.

501 **Water Transport.** Two types of craft are used in water transport,
824 the korial and the woodskin. The korial (Carib, koriara) is a dugout canoe, the hull of which is made from a single log of wood. Konta wood (known to creoles also as counter and silverbelly) and sorodani are considered the best materials for making a korial, as they do not sink and are not so soft that they are easily

damaged. Craft made of mora and crabwood have come to my 501
notice, and I am told that other woods are also used for this pur- 824
pose. The tree trunk, after being felled, is stripped of bark and
worked with cutlass and axe into the shape of the hull. Then a 322
depression is hacked in the top and hot coals placed in it. These 501
are fanned, so that the wood will be charred to a depth of a few inches, following which the coals are removed and the charred wood scraped out with a chisel made of an old cutlass. This process is repeated until the canoe is hollowed out completely and the walls are of the proper thickness. Finishing work is done with knives obtained from the trading posts. The craft may be spread or not according to the wishes and the enterprise of the owner. Struts of wood are inserted between the gunwales at the widest point and pounded fore or aft toward sections where the gunwales are closer together, thus widening the opening. It is said, although I did not have the opportunity to observe this process, that the spreading is somewhat facilitated by filling the hollow with water into which hot stones are dropped, making the water warm and so softening the wood. When the korial is finished the bow and stern each slope upward and overhang the water. The steersman sits in the stern without any support. Other passengers sit either on the bottom of the korial or on small transverse pieces of wood which are placed at intervals as seats. The completed korial is provided with a number of transverse struts, wedged between the gunwales, which must be kept in position if the craft is not to warp. Every korial carries a small calabash to be used as a bailer as it is a rare korial which does not leak. The craft range in length approximately from ten to eighteen feet. Beams range from eighteen inches to two feet. Characteristically, they are extremely unsteady and, especially in old specimens which have become warped, a fine balance and reciprocity of movement is required of all occupants. The strongest paddler usually takes the bow seat with a weaker member of the crew, a woman, for instance, at the stern. Other occupants fill the intervening places and are expected to paddle. The load of freight is carried amidships, usually covered by plantain or banana leaves to protect it from the rain. Both the bowman and the sternsman are expected to assist in the steering.

Paddles used for the korial, as well as the woodskin, are the

501 single bladed, foliate type, with transverse handrest, as figured by Roth.[1] When two or more men are paddling in the same canoe they usually work by a rhythm, which is beaten with the shafts of the paddles against the gunwales. As the paddle is raised for the next stroke the shaft is tapped on the gunwale. Rhythms which are in common use are: 1) long stroke - long stroke - long stroke, etc., 2) long - short - long - short, etc. 3) long - short - short - long - short - short, etc. The bowman starts the rhythm in slow cadence which is gradually, over a period of about ten minutes, increased until it becomes too fast to follow. Then a break is made and a new rhythm started.

501 The woodskin (w̄ep'pyu'ara) is a shallow craft made from one piece of tree bark. The bark of the purple-heart (*Copaifera pubiflora*) is considered the best material. It is constructed in the same manner as described in Roth.[2] The advantages of the woodskin are that it is light, it has a small draft which permits its use in very shallow water, and it can be made in a relatively short time in cases of emergency. A woodskin is even more unsteady than a korial, and having less freeboard, is more likely to be swamped. I saw no examples more than twelve feet long, most of them being about ten feet in length, with two-to-three-foot beam.

Cotton, rags, and mani gum are used for calking river craft. Sails and oars are not in use among the Indians of this area on their own craft.

502 In low water it is frequently necessary to step over the side of the korial to push or drag it over sand bars and to force it under low fallen logs which block the channel. There is also usually an inch or two of water in the bottom of the craft, so that a Carib river journey is seldom a dry experience.

The Carib technique of taking korials over falls or rapids is as follows. The boat is unloaded, and a heavy bush-rope attached to the bow. It is then brought to the foot of the immediate falls of water, and dragged by the rope and pushed by main force to the next rise. In large falls, such as that shown in the illustrations, this is an operation requiring considerable team work and constant vigilance if the korial is not to be dashed against the rocks and destroyed. The Caribs are very skillful in all forms of river work, and, by dint of long experience, every man in a canoe party knows his place in an emergency without having to be told. 502

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[1] Roth, 1924, *An Introductory Study of the Arts, Crafts, and Customs*, Fig. 237, C and D.

[2] Roth, 1924, *An Introductory Study of the Arts, Crafts, and Customs*, pp. 615–617.

When not in use, the korial is tied to a post or tree on the bank and kept parallel to the shore by stakes which are driven into the water against its outer side. The woodskin is usually submerged in the water when not in use, so that the bark will not dry up and curl. 504

The skill of the Carib paddlers is shown in the sport of hunting the labba (*Coelegenys* sp.). This animal comes down to the river to drink and graze at night. On several dark nights Carib men have taken me on labba hunting expeditions, the sport being enhanced for them by my possession of an electric torch light which could be flashed in the eyes of the startled beasts. In pitch darkness, and in spite of the many logs and obstructions in the river, the canoe would be noiselessly manoeuvered along the bank without prematurely frightening the labba, which could be located by the noise of its nibbling and moving about. 225

When traveling on the river, a stop is usually made for the night about an hour before sundown. Time is allowed for the building of a temporary shelter on the bank or a sandbar, and for a bit of hunting and the placing of set-lines before darkness settles down. 484

RECREATION

Amusements, Stimulants and Narcotics, Art

As a rule the Barama Caribs are a jolly folk who in the course of their everyday lives manage to have more simple enjoyment than the average member of a more civilized society. They are continually laughing and joking among themselves even when engaged in rather arduous tasks; they enjoy entertaining their friends and being entertained, and all possible opportunities for a "good time" are seized. 181

Small girls play with dolls (myakonbokupo) made from patumo wood and dressed with bits of cotton or cloth. Boys play with toy bows and arrows, practising for accuracy and distance, and also play with tops (kuma'epipyo) made of a pencil-like piece of wood thrust through an akuru seed and wound with kraua string. Usually the tops are spun on the ground, occasionally in cotton 524 857 [824]

524 857 trays (as described by Roth).[1] Tops of the humming or singing variety are unknown on the Barama. Children of both sexes amuse themselves with making figures of string on their fingers. I have simply noted this fact without attempting to investigate the patterns followed, inasmuch as Roth has treated the subject of string figures rather exhaustively.[2]

A game which one is surprised to encounter in this region is the hoop and stick game, played by small children. The game is called onambatoba tonomi. The stick is called wiwimi, and the hoop tondori. A hoop about a foot in diameter is rolled along the ground by one player while the opponent attempts from a given distance to cast a slender lance-like stick, three or four feet long, through the hoop without touching it. The players alternate in throwing the stick and rolling the hoop.

Children also play with stilts. Each stilt is made of one piece of wood with the footrest not more than a foot above the ground. It is a question as to whether or not stilts have been introduced by outsiders.

527 The social occasion par excellence for young and old alike is the drinking spree. This affair takes place when a newly married couple moves into their house, when a house has been newly completed, when distinguished visitors come to the settlement, and otherwise as frequently as the supply of cassava and other field products will permit the manufacture of drink. During the months of December and January the cassava is most plentiful, and it is during this period that the sprees are held most frequently. Indians on the lower river who have come in contact with missionaries connect this period in a vague way with the word "Kissmuss" (Christmas), but the coincidence of dates is apparently purely accidental. 797

A spree is always given by an individual family, of which the members act as hosts. Invitations are sent out to others of the settlement and frequently to relatives and friends in other settlements. Travelers are usually informed of the date of an impending spree on their line of march, and spare no effort to arrive in time. Once he has started "spreeing" nothing will persuade an Indian to leave until the drink is exhausted. Boat hands working for me who have been confined to their hammocks with fever of several 527 degrees, upon being invited to a spree, have been known to leap from their sickbeds and perform the most arduous labor in order to get the party to the drinking bout on time. At one time I was without supplies for ten days because the men who had been sent down river to fetch them had joined a spree at an intervening settlement.

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[1] Roth, 1924, *An Introductory Study of the Arts, Crafts, and Customs*, p. 496.

[2] Roth, 1924, *An Introductory Study of the Arts, Crafts, and Customs*, Chap. 24.

For several days before the social event the women of the 273 entertaining family have been busy preparing the drink. Cassiri and paiwari are the two most popular alcoholic drinks. Cassiri is made according to the following recipe. The cassava is grated and squeezed and placed in a large pot with water. In the meantime, some thin cassava cakes are baked and allowed to become hard. These are chewed and spit into the pot. Sometimes, though not always, cane juice is added in the proportions of about a pint to a gallon of cassiri. The mixture is then placed in the cassiri kanu and allowed to "set" for from one to three days, at the end of which time it has a slight "bead" and the alcoholic content of weak beer.

Paiwari (paiawaru) is made as follows. The cassava meal is formed in thin cakes, which are baked until they are brown on both sides and toasted all the way through. Some of the cakes are then broken up into small bits and placed in a pot which is filled with water. Other cakes are chewed and spit into the pot in the same way as in the making of cassiri. Sometimes, though not always, cane juice is added. The mixture is then placed in the cassiri kanu to set. Paiwari has a cereal taste due to the toasted cassava bread, which is different from the taste of cassiri. To one who had at sometime or another soaked rye toast in weak beer, the taste of paiwari would not be unfamiliar. Both paiwari and cassiri are usually colored by grating a red potato into a mixture before it is set.

Unfermented cassiri, a supply of which is usually on hand in 272 each house, is taken as an early morning pick-me-up the year around upon rising.

Alcoholic drinks are also made from fermented cane juice, pineapple juice, and field corn. Due to the fact that supplies of the raw materials of these drinks are scarcer, they are seldom used at sprees, but are kept for home consumption.

527 The guests, attired in their best ornaments, face paint, and raiment, usually arrive shortly after dawn of the first day of the spree. Before it is light someone has started beating rhythms on the sambura, or drum, and playing tunes on a fiddle. During the morning the men and boys gather in one end of the house telling stories and amusing each other with conversation while they drink. They lie about in hammocks smoking, eating, talking, and playing with such musical instruments as may be present (Plate 23, *a* and *b*). In the afternoon the dance usually begins and lasts until late in the evening. The dancing takes place in the house or in an open space outside the house.

527 The general rules of etiquette at a drinking spree are as follows.
576 The aged people stay by themselves, it being beneath their dignity
and capacity to indulge fully in the sport of the young. Women
do not drink with men. The lady of the house, most often the
wife of the house owner, serves the drink to the guests in person.
Usually a large calabash, holding two or three quarts and hemispherical in shape, is filled from the kanu. In it are floating several
small calabashes. The hostess fills one of these smaller calabashes
and hands it to each guest. Specially honored guests are presented
with the large calabash full of drink at each serving. One must
always take the first drink from the calabash which is served to
him, but if he does not desire the full contents, it is polite to pass
it to someone else who will drink all but a small residue, which the
[832] original recipient must finish. Sharing one's drink with a woman
is a way of showing that one regards her as attractive. It is impolite for anyone but the original recipient of the calabash to
return it to the hostess, and he must return it empty.

534 No particular name is applied to the dance which accompanies
a spree. (Wano, to dance.) Music is usually supplied by two men
who beat samburas, or wooden drums with double heads of akuri
skin, (Plates 23, *a*, and 24, *a*) and one or more men with fiddles.
The latter may be of European design, bought from a shop, or
may be made from bamboo stems or congo pumps. Both types
[462] are strung with three cotton threads and played with a yarriyarri
bow strung with kraua twine. Anyone of the male sex can play
the drum or fiddle, although most settlements have certain
535 individuals who are especially proficient. Usually an old woman
527 and several little girls begin the dancing, which is always in line

(Plate 24, *b*). The individuals of the line of dancers are joined by placing their arms around each other's shoulders and waists. Later the younger women join the line of dancers. The women then snatch men from their hammocks or seats and force them to dance amid great hilarity. At the start of the dance a step is used which consists of swinging the right foot forward and bringing it back beside the other foot while the opposite leg bends slightly at the knee. The figure is then repeated on the opposite side. As the dancing becomes more abandoned the step consists simply of walking forward and backward in unison. There may be two or more lines of dancers, who at all times attempt to face the musicians. The latter, in turn, dance and cavort about as if trying to prevent encirclement by the lines of dancers, occasionally careening into the line in a mock effort to break it. In return, the dancers swoop about the musicians and attempt to force them into a corner of the house or make them fall over some article of furniture. These movements are said to have no symbolic significance at present, but are merely regarded as a form of sport. When the dancing is in full swing the sport becomes rather rough, for the tipsy musicians are continually colliding with the dancers or falling over obstructions, and the centrifugal force generated in the line of dancers as it swings about often throws the end members to the ground, as in "cracking the whip." During the entire dance songs are sung. These are often extemporized on the spot. Three tunes are used throughout the area, which are set down at the end of this section. There may be other tunes, but these and variations upon them are certainly the most popular. An individual, either a man or a woman, will raise his voice in the midst of the dance music with the words of a song. Then the other dancers pick up the words and join the singing. The composers of these songs are always recognized as such, and no one would think of claiming the authorship of a song which is known to have been introduced by someone else. Certain individuals are known as ready composers of such lyrics, four examples of which are presented herewith:

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527
533
[424]
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539

1. (Composed by a woman)

karoriapo, iyao, iyao
I am going to carry you away, uncle, uncle,

533
539

karoriapo, iyao
awityopumbo winyo karoriapo
from your own place I shall carry you away
awitini poko koyumbo, iyao
you make good sport, uncle.

(Freely: Come with me, strange man, come with me from your home. You are a pleasant man.)

2. (Composed by a woman)

tesene twityopo winyo
come from far, from his place
o'opupo idomumwe tawade
come to her; we sing for him
katro mumwe hearing sing
like she hearing sing

(Freely: He has come from his home far away to see her. We sing for him. She likes to hear us singing for him.)

3. (Composed by a woman)

iropokosene iyao
let us stay here, uncle
orowane ropa mitakepa
why are you going again?
ai'ine potowa oyawani endai'ako
if I see you sometime another time
yumba apo'ine tedo powaidye
I shall remember you, if you go away.

(Freely: Remain with me, strange man. Why are you leaving so soon. If I see you again, I shall remember you, even though you go away.)

4. (Composed by a man)

yambatani koro kutopoti
don't look in my face I will
idyako yumbo apo'inye deto
always I will remember
pawaidye pote potoyo;
if you do.

533
(Freely: Do not look into my face that way, for, if you do, I 639
shall never be able to forget you)[1].

As the affair progresses, the participants of course become pro- 273
gressively influenced by the drink, which is not intrinsically very 527
strong, but which when taken in large quantities, steadily, for sev- 833
eral hours produces all degrees of drunkenness. Restraints which
are ordinarily practised are relaxed. On the one hand, an atmos-
phere of good fellowship prevails, individuals borrowing goods and
taking privileges which would not even be mentioned during
soberer hours. On the other hand, suppressed grudges are often [578]
brought to the surface and accounts settled with blows, a form of
action which is seldom taken by a sober Carib. Men and women
normally are extremely modest about exposing their sexual organs, [514]
even to members of their own sex, but during a drinking spree
they can be seen urinating publicly and making jokes about it.
However, I have seen no example of the practise which writers
on the Guiana Indians have so frequently mentioned, namely,
vomiting in order to increase one's drinking capacity. As the
evening wears on the more enterprising men have usually arranged
trysts with girls or women. The festivities gradually die a normal
death as these couples slip off to their rendezvous, leaving the
remainder of the party to drop into drunken sleep.

A spree continues until the supply of drink is exhausted. This 527
is usually two or three days, and during this time the program of 273
activity outlined above is vigorously kept up. When the beverage 513
supply has come to an end the participants in the spree usually
get into their hammocks and spend about twenty-four hours sleep-
ing off the effects of the orgy before returning to their own homes.

The several forms of alcoholic stimulant have been described
above. Tobacco remains to be mentioned. The tobacco plants 249
grown by the Indians are of medium size, both as to height and 825
leaves. They are planted from seed in the fields, and seedlings are
sometimes, though not invariably, replanted after they have at-
tained a height of a few inches. The great curse of the tobacco
plants is a ground worm which destroys the roots. It is believed
that planting the seed during the dark of the moon is favorable

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[1] The author does not have sufficient familiarity with the Carib language to vouch completely for either the transliterations or the translations of these songs, which were obtained through interpreters. They have, however, been checked with three interpreters.

249 because of the fact that worms are supposed to lay their eggs only 825 during the full moon. At intervals the soil around the roots is soaked with haiari juice (a fish poison), which is believed to kill the worms. When they have reached a proper size the leaves are 276 picked one by one. If the crop is plentiful, they are hung from the crossbeams of the house, over the fireplace, where they will be gradually dried and smoked. After being thus cured for a few weeks or months they may be twisted into coils, or "plugs," somewhat like "navy twist." Other growers simply make the leaves into small rectangular bales tied together with cord. If the crop is poor or the supply of smoking tobacco small, the leaves may be used green. In such a case, which is not infrequent owing to the improvident ways of the husbandmen, a green leaf is held in the hands over a bed of coals until it has been partially dried out and toasted a spotty brown color. It is then wrapped into a cigarette directly. In all cases the action of wood smoke is believed to have a mellowing effect on the tobacco.

Tobacco is used only for smoking purposes in the course of everyday life. (Tobacco juice is imbibed by medicine men and others on certain religious occasions, and it may be dropped in the eyes for medicinal purposes.) Tobacco is smoked exclusively [824] in cigarettes by the natives. The inside bark of the kakareli tree (*Lecythis* sp.) is used as wrapper. Every man has a supply of this bark about his house, cut into long strips about one and one half inches broad. The outer bark of the tree is removed, and the inner bark taken off in these strips. One end of the strip is beaten with a stick or cutlass in order to separate the several layers of paper-thin tissue of which it is composed. A strip of tissue thus separated can be peeled off when it is to be used, and smoothed by laying it on a flat surface and scraping it with the edge of the cutlass. The tobacco is rolled into a thin, pencil-like cylinder between the palms, and then rolled into a strip of kakareli bark ten to twelve inches long. The tube of bark is tied together at each end and in the middle by thin threads of kakareli bark, which are stripped off the edge of the wrapper. A cigarette a foot or somewhat less in length is thus made, which has a not unpleasant taste. The bark apparently mitigates the strength and bite of the tobacco.

Pipes, cigars, chewing and other methods of employing tobacco are not used by the natives.

In the field of art the Caribs have achieved only modest re- 532
sults. The simple decorations of household utensils and furniture, 522
personal ornament and decoration have been described elsewhere. A limited amount of sculpture in wild beeswax is performed for amusement. The few examples of this art observed by me were all caricatures, consciously humorous depictions of actual persons or animals, with no religious or magical significance.

Examples of musical composition and songs have been pre- 534
sented earlier in this section. Three general types of musical 322
instruments are in use. The sambura, or drum, has a wooden
frame with two heads of skin. Purple heart and silver belly [824]
(*Copaifera publiflora* and *Nectandra* sp.) are said to be the best woods for making the frame. A cylindrical section is cut from a tree, the outer bark removed, and the inside hollowed out with knives and chisels until the walls of the frame are about one half
inch in thickness. The skin heads are made of akuri skin (*Dasy-* 534
procta aguti) from which the hair has been removed. The original 281
outer surface of the skin is exposed when it is fixed to the drum. 284
The heads are each held in place by a hoop of tough withes bound about with kraua string and mani gum. The two hoops are united by a cross-string of twisted kraua fiber, which is attached in the European manner, and which may be tightened or loosened to tune the drum. Only one end of the drum is struck, and across the other, or silent head, is stretched a thin double thread of kraua, in which is twisted a small stick about the size of a toothpick. This stick, or resounder, lies against the silent skin head, and its position, together with the tautness of the two strings which support it, affect the tone of the instrument.

In use, the drum is usually held under the left arm, against the 534
side of the body, and struck with two sticks. The stick held in the left hand strikes the drumhead near its periphery in short light strokes, while the stick in the right hand strikes the center of the head more vigorously. The most usual rhythm is short (left), long-long-long (right). The drum is provided with a length of kraua string by which it may be slung over the shoulder for carrying.

Roth says that it is probable that "the two-skin drum was 534
introduced through the Arawak and Carib Islanders from North 177
America, after the European invasion. Such an hypothesis would

534 account for its silent end, its resounder, and its generally Spanish
177 name."[1]

The second type of musical instrument is the fiddle. Recently
traders in the area have stocked cheap European violins, which the
natives have bought with alacrity and strung with cotton thread.
The home-made type of fiddle is, however, constructed from
[824] bamboo, as illustrated in Roth,[2] or is made from congo-pump,
a soft grainless wood which springs up in abandoned clearings.
All types of fiddles are strung with three cotton strings, the tones
of which depend not upon their texture but upon their length and
tautness. The home-made fiddle is about two feet long by about
three inches wide. It is provided with pegs, bridge, and tail. In
playing it, the Carib holds the tail against the shoulder rather than
under the chin. It is a mistake to believe that these instruments
are merely playthings used for making some sort of indiscriminate
533 noise. The Carib tunes are studied carefully, and the public is
quick to criticize inaccuracies on the part of a virtuoso.

534 The third type of instrument is the bone flageolet. This is
321 usually made of the tibia of the tibisiri deer. A hole is made in the
[815] anterior margin of the superior epiphysis and shaped with mani
gum, so that the stream of air is directed against the sharp edge
of the anterior wall of the shaft. Three holes are provided at
[533] regular intervals. The sounds thus produced seem to harmonize,
to an untrained ear at least, with those produced by the native
fiddle. (See Plate 26, *b*).

534 Recently traders have introduced harmonicas or mouth organs
177 into the region, and the Indians have taken them up with great
energy. The mouth organ is at present, however, used only as a
noise-making device, since the natives are as yet unable to master
the harmonic scale.

538 Aside from songs sung to music, another form of literary effort
common among the Caribs is story-telling. A number of folk
tales are presented in our chapter on Myths. These comparatively
formalized tales are told less frequently, however, than are extemporaneous
yarns based upon personal experiences. At the end
of each day, at home or on the river or the trail, the adults lie in
their hammocks for some time before going to sleep and trade
yarns. These are usually somewhat embellished and exaggerated

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[1] Roth, 1924, *An Introductory Study of the Arts, Crafts, and Customs*, p. 467.

[2] Roth, 1924, *An Introductory Study of the Arts, Crafts, and Customs*, Fig. 239, B.

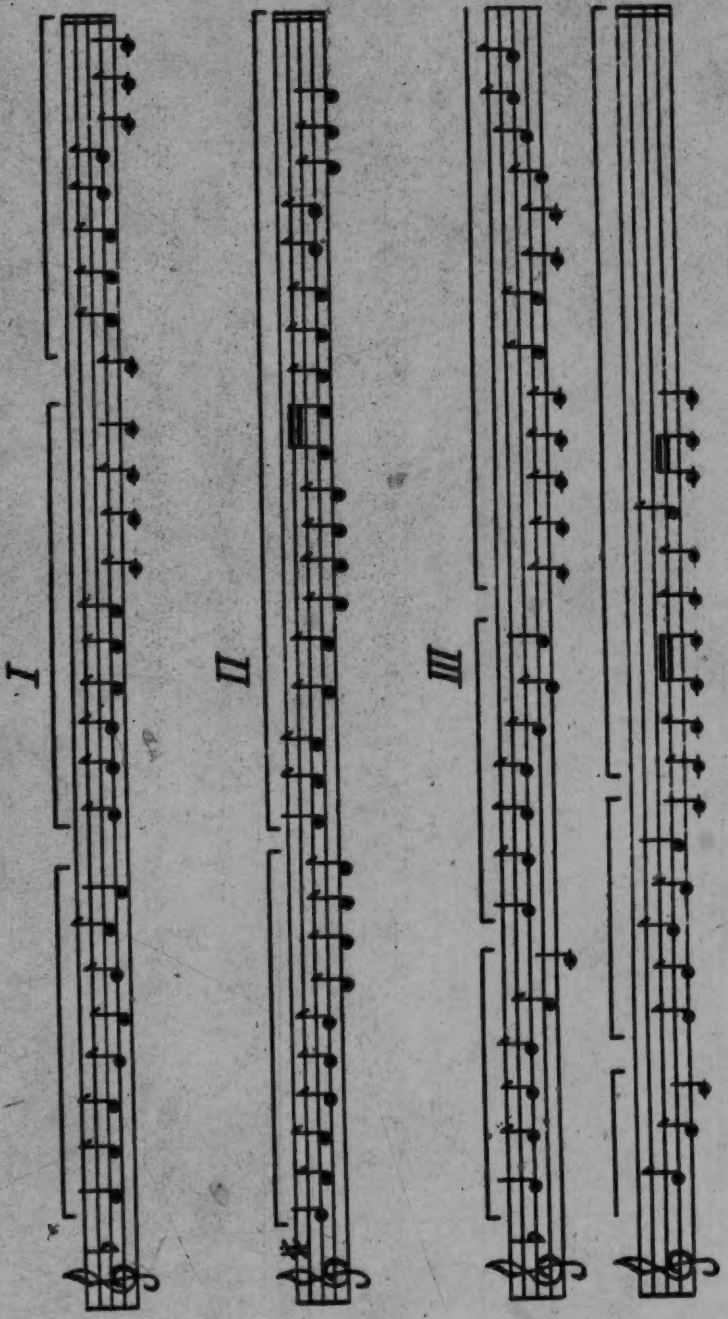

FIGURE 6

Three Carib tunes commonly sung and played on fiddles and flageolets.

538 accounts of their experiences, and are drawn out to considerable lengths. While an individual is telling a story the listeners continually supply exclamations, a high pitched "ko-o?" or an "ao-o" with rising and falling inflection. The pattern is for listeners continually to express surprise, astonishment, and amazement at the words of the speaker. It is also customary to repeat "yao" and to grunt at frequent intervals as a means of encouraging the speaker and showing him that he is holding the listeners' attention. Speakers dramatize their material with gestures and tones of voice. Excitement or laughter grip the group as the story progresses to its climax. Most of these stories are, of course, utterly pointless in translation, but I believe that this type of storytelling can be regarded as the Carib equivalent of the drama. [536]

RECKONING OF TIME

805 824 821 SPECIAL mention should be made of the Carib attitude toward the passage of time. No provision is made for reckoning the passing of the years, or for distinguishing one year from another, so that no one knows his exact age. The term for year is "siditcho," meaning "star," and referring to the seven stars of the Pleiades, which pass over the heavens once a year. Aside from these I have found little evidence of star lore among the Caribs. On the Barama it is said that one knows that the end of the year has come by noticing that certain wild fruits, such as the sawari nut, are ripe and are dropping to the ground. The present month is distinguished from the preceding and following ones by reference to the phases of the moon, but beyond this calculations seldom go.

211 805 When a man leaves home for a journey, he specifies the number of days he will be gone by giving to his wife a cord in which a knot has been tied for each day of his absence. The wife unties one of the knots each day that he is away, and expects him to return when the cord is finally knotless.[1]

The time of day is reckoned by the position of the sun. Thus, when asked how long will be required to reach a given point, an Indian will reply by pointing to the position which the sun will occupy when the destination has been reached.

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[1] For the distribution of this device in South America, and its connection with the quipus of the Andean area, see Nordenskiöld, 1930, *Modifications of Indian Culture*.

SOCIOLOGY OF THE CARIBS

IN order to understand the community life of any group of human 121 beings who are living together as a society, it is necessary to analyze the forces of unity and disunity, factors which on the one hand promote the social unity of the community, and those which on the other hand tend to break the society apart. In studying the social life of a society especial attention is usually given to groupings, because, due to the inherent and acquired personal differences among its members, a community rarely exists without some sort of internal organization which assigns to the several members of the community functions more or less suited to their social abilities.

One of the major objectives of the present investigation was to discover and analyze the social factors in Carib community life. Among the Caribs, whose culture generally lacks explicitness, the underlying factors of social organization are at some points far from obvious. Consequently, the most useful method seemed to be to examine all sides of community life from their social aspects. First, we shall attempt a general analysis of Carib society, following which will be presented a more or less intensive analysis of the social life of a single typical community, Sawari settlement.

Groupings in Carib Society. The most obvious facts of social 571 grouping among the Caribs, facts which are apparent to the casual observer, are that the people are organized into individual families or households, and that these families are in turn grouped into small communities, which we shall call settlements or villages. Upon further examination, four additional types of grouping may be discerned, the kin, the extended family, the group of friends, and the kanaima cult. Six types of grouping, therefore, furnish the basis of the social organization: the family or household, the kin, the settlement, the extended family, the group of friends, and the kanaima cult. The factors of sex and age play varying roles in these groupings.

It is now proposed briefly to discuss each of these types of group from the following points of view: (a) factors determining membership in the group; (b) social functions of the group; (c) factors tending toward disorganization of the group.

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The Family. With the advent of puberty the Carib boy and girl enter a period of experimentation and education by experience, which eventually leads to marriage. No rites mark the puberty of boys, but girls on the occasion of their first menstruation are secluded in one corner of the house. A small room is constructed for this purpose, shutting off the rest of the dwelling by partitions of manicol leaves. The girl, during the few days of her confinement there, is allowed to eat only cassava and water. Her hair is bobbed to the level of her ears, and her head and face covered by a cloth. During this time she is advised in an informal way, by her mother and other older female relatives, on female hygiene. She is also advised on the behavior and duties becoming to a wife, although instruction in marital duties is not confined to this time alone. No formal rites of a religious or magical nature are performed at this time. Opportunity is simply taken at this impressive physiological crisis in the girl's life to impress upon her certain facts which all married women should know. The technique of the sexual act is explained in some detail, care of the body during the menstrual period is described, and the restrictions placed upon women at menstrual periods are outlined. A special loin cloth of the usual pattern, but which is worn only during menstruation, is prepared for the girl. The girl is told that during her period a woman is not allowed to eat meat, to prepare food, or to touch a man's hunting implements. She must remain in her hammock, and is allowed only to spin cotton. A man who eats food prepared by a woman during her period will never be well, and bad luck will attend his hunting efforts if a menstruating woman touches his weapons.

836 For several years following puberty the young people of both sexes carry on a certain amount of sexual experimentation. Usually at sprees, when the rules of decorum are somewhat relaxed, the unmarried boys and girls sleep together as a matter of course. They are encouraged by their elders, who compose songs and jokes upon the subject, and arrange to make such activities more or less convenient. [574] A young man visiting a strange settlement is usually provided with an unmarried girl, toward whom he may direct his advances, and, as a part of the social dance which accompanies drinking, all of the women make joking advances to the unattached men. There is sometimes a certain amount of rivalry

among unmarried girls for the attention of an eligible bachelor 836
on these occasions. A young man between the ages of about fifteen and eighteen makes a point of "going the rounds," attending sprees at as many settlements as he can, and thereby meeting as many eligible girls as possible. His father usually takes a paternal interest in his amorous intrigues, by arranging trips which will enable the young fellow to "see the world." Thus, the average young woman and young man enjoy a series of affairs during their youth. It is rarely that a girl becomes pregnant during this period. The reasons for this I am not sure of, but informants [842
are definite in stating that both contraceptive methods and abortion are used. The opinion seems to be prevalent, however, that an unmarried girl uses these methods infrequently. It is possible, of course, that a certain number of conceptions which might arise from such casual unions are prevented by temporary sterility and by ineptness of technique.

Contraceptive measures may be used by both men and women. 842
They take two forms: bush medicines which may be self-adminis- 847
tered, usually as infusions; and ritualistic treatments by the piaiyen.[1] Abortion is induced usually by old women who are skilled in such matters. They administer an infusion of bush herbs to the patient, which is said to induce violent abdominal cramps. Manual assistance is given by kneading the abdomen, and, occasionally, it is said, small sharp sticks are inserted into the vagina "to open the woman up." The latter method is said to produce chronic infertility which can be cured only by the piaiyen. My information on this subject is somewhat indefinite inasmuch as the methods are for the most part in the hands of women and piaiyen, who, when questioned, naturally profess ignorance of the subject. A certain plant, of which I have specimens which have not been identified, is drunk as an infusion by the men, and is said to make "a man run water." It is effective for only a day or two after use. All male informants agreed, often volunteering the information, that contraceptive and abortive methods of one sort or another are in use.

Premarital sexual affairs theoretically take place only between 835
individuals who are eligible to marry, i.e. those who are not siblings or parallel cousins. Incest tabus apply to siblings and parallel

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[1] Priest or medicine man.

835 cousins of all degrees, all other persons of the same generation being considered eligible and being called according to sex, takano (female cross cousin) and iyao (term for male cross cousin). As a matter of actual fact, intercourse does take place between members of the incest group occasionally. If it is known to the community as a whole, ridicule results, but I learned of no formal religious sanctions for the incest rule. [684] Breaking of the incest tabu is frowned upon; it is considered unlucky and also nasty and indecent. Almost any sort of ill luck and sickness may result from incest, and this the piaiyen may attempt to cure, although his treatments are not considered highly efficacious for such cases. But if an individual wishes to take the chance, the other members of the community will only laugh at him or regard him as singularly foolhardy. A widower, residing in Haiari settlement, was said to be sleeping with his daughter during the entire time I was in the region. The case of a man from Ianna settlement, who was said to be sleeping with his mother, was frequently related. In each of these cases it was commented that the individuals in question were behaving "like dogs," but they were not ostracised or punished in any physical manner.

584 As time goes on, a young man feels that it is time he settled down to family life. He usually has developed a liking for some particular girl, whom he revisits frequently at her father's house, and in whose house he finally becomes a guest of long standing. The girl's relatives usually, after some time, raise the question of the seriousness of his intentions, and he finally speaks to her father, asking the older man to give him his daughter. In other cases, a young man may ask a father for a daughter the first time he sees her. In either case, if the match is approved, the old man requires that the suitor build a house and cut a field in the bride's settlement, feats which are regarded as testing not only the seriousness of the suitor's intentions, but also his ability as a homemaker. During the time required for the accomplishment of these tasks, the suitor lives in his future father-in-law's house, enjoying the favors of the girl. It is obvious that sex is a minor consideration in marriage. When the house and field are completed, the young couple prepare to move in and settle down. The groom must pass one more test, however. While the bride prepares drink for a spree which will be given at the house warming, the groom goes

out on a hunting expedition, accompanied by the men of the settlement 584
who are related to the bride by blood or marriage. The
object of this expedition is to prove the young man's fitness as a
meat provider for his future family. During the early part of the
day's hunt, his companions place every possible hindrance in the
way of his obtaining a bag, such as making noise when a quarry
has been sighted, or rocking the canoe as the hunter takes aim
while on the river. This is a very hilarious occasion for the [522]
other participants and a very embarrassing one for the groom, who
will be rejected if he returns empty handed. If the groom is at
all acceptable to the bride's relatives, however, they usually
arrange that, after a day of tribulations, he will get some sort of
bag to bring home. During his residence in the settlement they
have had ample opportunity to form an opinion concerning him.
The hunting expedition is apparently merely a formality, as it
is a rare groom who does not know fairly well whether or not he
has passed the examination of his future in-laws long before the
time for the final test arrives.

Upon the return of the hunting party, an offering of drink is 585
made to the spirit of the house, a spree takes place, and the young 591
couple settle down to married life. They usually live in the girl's
settlement until the birth of the first child. Later they may move
elsewhere.

A man taking a second wife, either as a widower or as the master 587
of a polygamous household, merely requests her from her father,
giving the older man some small present or services in exchange.
The house-building, field-cutting, and hunting tests are not considered
necessary in the case of a man who has previously been
married, since he has already given evidence of his fitness.

It is apparent that marriage, coincidental with matrilocal residence, 602
entails the acceptance of the groom by the group to which
the bride belongs, which we shall call the extended family. Marriage
thus involves a sort of contract between a man and his wife's
group, but does not involve a contractual relationship between
his own relatives and those of the bride.

After marriage a certain reserve exists between son-in-law and 606
father-in-law. A man never gives his father-in-law direct orders
or suggestions, but always speaks to his wife about the matter in
hand, and she transmits her husband's ideas to the older man. On

606 the other hand, a man always speaks to his son-in-law through his daughter in similar affairs. Occasional exceptions to this rule occur in cases where the two men have been exceptionally good friends of long standing before the marriage.

A man is even more "ashamed" in the presence of his mother-in-law and, although he may see her, hardly ever speaks to her directly.

A woman's relations to her parents-in-law are also reserved, but her contact with them is rare, due to the practice of matrilocal and independent residence.

We shall describe other kinship usages revolving about the marriage relationship in our analysis of the kinship system.

833 Sexual intercourse normally takes place in the hammock in the so-called European position.

843 A woman calculates the date of parturition by counting the months from the stoppage of menstruation. When she feels the foetus move in her womb she believes that birth will take place a month hence. Calculation of the precise day is seldom attempted.

If a man desires a male child, he searches until he finds a small root of cassava which resembles a penis and testicles. At a moment when his wife has turned away from him he throws this against her back, and turns around casually as if he had done nothing. If the woman picks up the root, she will give birth to a boy. There is also said to be a method of producing a female child, but my informants did not know what it is.

842 The following method of insuring the fertility of a woman is in use. An old woman, at the behest of the husband, mixes the mascerated root of a plant called murewa with rubbish and sweepings from the floor of the patient's house. This mixture is burned, and the ashes are administered to the wife in cassiri, without her knowledge.

843 During pregnancy, "after the wife has swelled up," intercourse between the spouses ceases until about a month after birth. During this time a man satisfies himself elsewhere.

Thoughts, behavior, or experiences of a woman during pregnancy are not believed to influence the personality or appearance of the child in any way.

844 At the birth the mother rests on a bed of leaves on the floor of her house. She may be assisted by other women, who exert pres-

sure on her abdomen by encircling it with their arms while squatting behind her. Men are excluded from the clearing during the process of birth. It was said by two informants that occasionally wooden hooks were used to assist difficult births. Other informants knew nothing of such a usage. 844

A birth took place in Sawari during my stay there, and I happened to arrive in Turingbaug settlement about five minutes after one had occurred. In both cases the mothers were up and about their household duties the next day, although obviously in a weakened condition. The babies were wrapped in old cloths and put to the breast immediately. The umbilical cord was buried in the bush with the placenta. The couvade practices are described in the section on Religion. 846

Both boys and girls are desired, although when asked to make a choice, men say that they prefer to have boy children because they are so much more useful. 842

Babies are bathed at least once a day in cold water. If a child cries at night, the mother frequently will get up and dash cold water on it to quiet it. 846

Personal names are of the nickname variety. When the baby is a few days old, the mother gives it a name. Alec's, for instance, was Apotopopo ("Big Head"). When the child reaches adolescence the parents give it another name; in Alec's case this was Tunde ("One who Carries Things"). The childhood name is used about the house as a term of address by other members of the family. There seems to be no tabu on the use of this name by other people, although a grown person is "ashamed" if his mother uses his childhood name. Jokes are made between grown persons on their respective childhood names. The adult name, however, is strictly a personal matter, and all persons past puberty are addressed in kinship terms. Only extremely close friends know each other's names, and this knowledge is regarded as a matter of confidence. Two men who have been very close to each other for a considerable time may be talking and laughing together. Suddenly one will say, "What is your name?" The other will tell him, and there will be an exchange of names. It is believed that a magician or, in some cases, a priest-doctor can work black magic more effectively against an individual whose name he knows. The name itself cannot be conjured with *per se*, but it is believed 553 [551] 553 754

553 that a practitioner, if he knows the name, can more precisely
754 identify the individual toward whom he wishes malevolent spirits
and powers to direct their attentions. Thus Alec, my interpreter,
during the four months we were in and about Sawari, although he
was very popular with all the inhabitants, succeeded in learning
the personal names of none of the individuals living in that settlement.
When addressing him or speaking of him, they always used
the relationship terms pamu and tseo.

551 A list of a few Carib names, the bearers of which were personally known to me, is given below. In each case they supposedly represent a name which has never been borne by any other individual. In cases in which the name is that of some animal, or an attribute of an animal, no idea of a guardian spirit or of personal totemism is involved, although an individual may be given a certain name because he in some way resembles a certain animal. For instance, James Hendricks is called Krapo (tree frog) because he is thin and nervous.

Male

Patakai — Huri fish
Muturu — black yarrau fish
Tanomi — red eye
Marasi — small camudi snake
Marimidi — curly hair
Karoshi — little chicken

Female

Woko — powis, bush turkey
Puma — short stature
Tumu — gray hair
Miaiwi — young girl
Maipuri — bush cow
Wararu — small crab
Kondi — black child

853 Suckling continues either until an ensuing pregnancy or until the child is old enough to walk about. Lactation is not a bar to sexual intercourse, and women who are far advanced in pregnancy are frequently observed nursing children.

[861] Children are rarely punished corporeally, although they are
868 supposedly at the orders of their parents. After the age of about
ten, a girl is started to work at household tasks by her mother, and
a boy is taken hunting and taught the lore of the bush by the
father, thus beginning their serious education in their respective
867 life tasks. Children are present at practically all affairs which
take place around the house and settlement, and thus become
familiar with the behavior of adults at an early age. Neither sex
life, nor family quarrels, nor adult vices are mysteries to them,
because they see these things from earliest childhood. At drinking

sprees children smoke whatever tobacco they can beg from their elders and drink all that they can. One not infrequently sees suckling babies given cassiri by their mothers. Alcohol and tobacco, to the Carib mind, like food and drink, are to be enjoyed by all human beings, although in largest measure by adults in their prime because these latter control the supply. 867

A wife is theoretically at the orders of her husband. It is supposedly the man who makes the decisions affecting the family. As in most societies, however, the respective influences of the mates upon family policy vary with personalities and circumstances. Matrilocal residence during the first part of married life restrains many a young husband's temper and doubtless trains husbands to assume a more tolerant attitude than they would if outside the wife's village. For a wife who has been mistreated appeals to her relatives, and, if they agree with her, the matter is taken up by them with the husband. If he persists in mistreating her, her kinsmen will eject him from the village. Although matters are sometimes composed between the mates, such a forcible ejection usually is equivalent to divorce. On the other hand, a wife who is habitually lazy and recognized as such by the community may be beaten with impunity by her husband. Actually the women, generally speaking, exert a good deal of influence upon their husbands. A man usually consults with his wife about such matters as taking a trip, building a house, working for outsiders, acquiring trade goods. As has been described, when a man leaves his wife at home while he goes on a journey, he tells her on what day he will return, a date which is recorded by a knotted string which he gives to her. Each day he is gone she unties one of the knots, and if he is not home on the day the string is finally knotless, or at most a few days thereafter, his absence is said to be grounds for divorce. A woman in this case returns to her father's house and becomes available for another marriage. Consequently, men are meticulous about keeping their engagements at home. 562 593 [586] [586]

Aside from the two grounds of divorce already mentioned there is parting of company by mutual consent. Although no rule is in force, in the cases which I investigated the male children stayed with their father, and the female children with the mother. A plant called wamba may be used as a charm to prevent desertion. It is rubbed on any article belonging to the other mate. When 586 832

586 the latter uses the article in question he or she is overcome with
832 desire for the other.

587 A widow always marries her husband's brother or some member of his kin. If she does not, she risks the accusation that she killed her husband for the love of another man. A widower frequently, but not necessarily, marries his wife's sister.

592 The family is therefore composed of a man and his one or more
597 wives and their unmarried children. Each family has its own house
and seldom shares a house with adult individuals other than the
spouses and their unmarried children. No case was recorded of
an adult male (with the exception of young suitors) occupying a
house jointly with another adult male. If several adult women
are living in the house they are always found to be wives or con-
cubines of the man of the household. Children of deceased rela-
[582] tives are, however, often adopted. Practically every individual in
the community over the age of about twenty is married or has
[736] definite plans to be married. Universal matrimony thus obviates
dependency occasioned by old age as well as loneliness. Children
of one or the other of the spouses by previous marriages may be
included in the family group. If both parents of young children
die, they are usually adopted by the maternal grandparents. The
family, composed of spouses and their own and adopted children,
is thus coterminous with the household.

595 A man may take additional wives if he can persuade their fathers that he can care for them. There seems to be little objection on the part of the brothers or kinsmen of the first wife, if she is not mistreated. Aside from the type of polygamy in which the several wives live in the same household, several cases were recorded of men who were maintaining two households, each in a separate settlement.

Within the household there exists no formal distinction between
(858) children of polygamous or subsequent marriages, and a child's
position in the family depends largely upon its personality and
age. The same is true of wives in polygamous families.

594 Three means of entrance to the family group are possible: birth, adoption, and marriage. A man is born into a household, and lives there until he is ready to marry, whereupon he establishes a household of his own. The position one occupies in the household group, therefore, depends upon whether the group in question

594 represents one's family of orientation or one's family of procreation. A child is subordinate to both his parents, while a married woman is subordinate to her husband, and a married man is superior to all in the household.

594 867 The household group is the primary educational institution in Carib life; boys are trained in men's duties by their fathers, girls are instructed in the activities of women by their mothers. In the absence of club houses or other extra-curricula educational institutions, the home is the primary agency for the dissemination and formation of the socially accepted attitudes. Furthermore, the home is the primary economic unit of the community.

594 Membership in a household group is terminated by age, as in the case of children who grow up and form households of their own; by agreement, as in the case of certain types of divorce; by disputes, as when a husband and wife quarrel; or by death.

601 **The Kin.** Outside the more intimate relations of the family or household lies the larger group of the kin.

The kinship terminology is presented in the appended lists. In List I will be found in separate columns the Carib equivalents of English terms of relationship used respectively by men and by women. List II presents the English equivalents of Carib terms of relationship used by men. List III presents the English equivalents of Carib terms of relationship used by women. The relationship system is presented graphically in the Charts (Figs. 7 & 8). In the lists, certain terms will be found in parentheses; these represent alternatives or variants given by occasional informants. The terms without parentheses are those in general use. In certain cases prefixes and suffixes are enclosed in parentheses, indicating that the syllable thus enclosed is sometimes, but not invariably, used with the term in question. In the absence of contradictory evidence, I have assumed that the suffix *-ko* does not change the fundamental meaning of the stem of a kinship term.

124 Regarding the accuracy of the present lists, I may say that the terms were collected by the geneological method. Complete geneologies for two Carib settlements, Kariako and Sawari, were taken. The words were then checked through with several informants, in the abstract, and with case material at every opportunity. Finally, to check on the accuracy of my interpreter's translations, all the information was checked with Mr. and Mrs. H. Pestano

124 of Towakaima. Both have received elementary educations in the colonial schools, and Mrs. Pestano, who was born a Carib, speaks the Carib language fluently and is personally acquainted with much of the case material.

601 Following is an analytical outline of the system:

ANALYSIS OF THE RELATIONSHIP SYSTEM

A. Consanguineal relatives
- I. Classification
  - a. Same generation as speaker
    - 1. Parallel cousins are classed with siblings (with sex distinction).
      - *a.* Exception: a woman calls her maternal parallel cousins (i.e., the children of her mother's sister) by the same terms which she uses for her own children.
    - 2. Cross cousins are classed together (with sex distinction).
      - a. Note: a woman calls her female cross cousins *yedote*, a distinctive term; but she calls her male cross cousins *iyao* (*ko*), the same term which she applies to her mother's brother.
      - b. Note: a man calls his female cross cousins *takano*, but he also applies this term to his sister's daughter and the children of his female parallel cousins.
  - b. First ascending generation
    - 1. Father, father's brother, and father's male parallel cousins are classed together.
    - 2. Mother, mother's sister, and mother's female parallel cousins are classed together.
  - c. Second ascending generation
    - 1. All members of the grandparents' generation are classed together (with sex distinction).
  - d. First descending generation
    - 1. Man speaking
      - *a.* Classes together in one group own children, brother's children, children of male parallel cousins, and children of female cross cousins (all with sex distinction).
      - *b.* Classes together in a second group sister's children, children of female parallel cousins, and children of male cross cousins (all with sex distinction).
        - (1) Calls the females of this group takano ("cross cousin").
    - 2. Woman speaking
      - *a.* Classes together in one group own children, sister's children, children of female parallel cousins (all with sex distinction).
        - (1) Note: also included in this class are the children of mother's sister.

(2) Note: children of maternal parallel cousins are called grandchildren without sex distinction.

b. Classes together in a second group brother's children, children of male parallel cousins (with the exception of maternal parallel cousins' children, noted above), and children of female cross cousins.

e. Second descending generation

1. All members of the grandchildren's generation are classed together (without sex distinction).

II. Distinction

a. Sex

1. Relatives are distinguished by sex in all generations except the second descending, or grandchildren's generation.

a. Exception: a woman calls her maternal cross cousins' children *ipwaru* (grandchildren), and therefore does not distinguish them by sex.

b. Age

1. Siblings and parallel cousins of both sexes are distinguished as to whether or not they are older or younger than the speaker.

a. Exception: a woman calls the children of her mother's sister, according to sex, son and daughter respectively and thus makes no age distinction.

c. Relationship

1. Same generation as speaker

a. Siblings and parallel cousins as a group are distinguished from cross cousins.

(1) Neither within the class of parallel cousins and siblings nor within the class of cross cousins are distinctions made indicating whether or not the relationship to the speaker is through the father or the mother.

(a) Exception: a woman calls the children of her mother's sister "children" as distinguished from her paternal parallel cousins whom she calls "brothers and sisters."

2. First ascending generation

a. Father, father's brother and their parallel cousins are distinguished from mother's brother and the latter's parallel cousins.

b. Mother, mother's sister, and their parallel cousins are distinguished from father's sister and the latter's parallel cousins.

3. Second ascending generation

a. No relational distinctions are made in the grandparents' generation.

601

4. First descending generation
    - *a.* Man speaking
        - (1) Distinction is made between the group comprising own children, brother's children, children of male parallel cousins, children of female cross cousins and the group comprising sister's children, children of female parallel cousins, and children of male cross cousins.
            - (a) Note: a man further distinguishes the female children of his sister and of his female parallel cousins, by calling them takano (female cross cousin).
    - *b.* Woman speaking
        - (1) Distinction is made between the group ("sons and daughters") comprising her own children, sister's children, and children of female parallel cousins and the group ("nephews and nieces") comprising brother's children, children of male parallel cousins, and children of female cross cousins.
            - (a) Note: A woman calls the children of her maternal parallel cousins by the same terms which she uses for her own grandchildren.
5. Second descending generation
    - *a.* No relational distinction is made for members of the grandchildren's generation.

B. RELATIVES BY AFFINITY

1. Mother's sister's husband is equivalent to father and father's brother and their parallel cousins.
2. Father's sister's husband is equivalent to mother's brother.
3. Mother's brother's wife is equivalent to father's sister.
4. Father's brother's wife is equivalent to mother's sister.
5. Man speaking: children of wife's sister are equivalent to his own children; children of his wife's brother are equivalent to his "nephews and nieces" (i.e. sister's children, children of female parallel cousins, children of male cross cousins).
   Woman speaking: children of husband's brother are equivalent to her own children (also sister's children and children of female parallel cousins); children of husband's sister are equivalent to brother's children and children of paternal male parallel cousins ("nephews and nieces").
6. Man speaking: brother's wife is equivalent to female cross cousin and sister's daughter; sister's husband is equivalent to male cross cousin.
   Woman speaking: brother's wife is equivalent to male cross cousin; sister's husband is equivalent to male cross cousin and mother's brother.
7. Spouse's brother is equivalent to male cross cousin; spouse's sister is equivalent to female cross cousin.

Abbreviations used in following lists: fa. — father; mo. — mother; y. — younger; o. — older; bro. — brother; sis. — sister; grf. — grandfather; grm. — grandmother; dau. — daughter; grs. — grandson; grd. — granddaughter; hus. — husband.

List I

RELATIONSHIP TERMS

English	*Male Speaking*	*Female Speaking*
1. fa.	papa	papa
2. mo.	tata	tata
3. y. bro.	kami	kami — (cho)
4. o. bro.	tseo	wa'ako
5. y. sis.	(mimbo-) yenatu	kami
6. o. sis.	wa'a	wa'a
7. grf.	tamoshi	tamoshi
8. grm.	pipi	pipi
9. fa.'s o. bro.	papako (papa runa)	papako
10. fa.'s y. bro.	papako (papapide)	papako
11. fa.'s o. sis.	(tatako or) wopui	wopuko
12. fa.'s y. sis.	(tatako or) wopui	wopuko
13. mo.'s o. bro.	iyao	iyaoko
14. mo.'s y. bro.	iyao	iyaoko
15. mo.'s o. sis.	tatako (tatap[illegible]idyu)	tatako
16. mo.'s y. sis.	tatako (tatapide)	tatako
17. fa.'s bro.'s son	y — kami o — tseo	y — kamicho o — wa'a
18. fa.'s bro.'s dau.	y — mimbo yenatu o — wa'a	kami, wa'a
19. fa.'s sis.'s son	pamuko	iyao
20. fa.'s sis.'s dau.	takano	yedote
21. mo.'s bro.'s son	pamuko	iyaoko
22. mo.'s bro.'s dau.	takano	yedote
23. mo.'s sis.'s son	y — kami o — tseo	uimwe (umwe) (ume)
24. mo.'s sis.'s dau.	y — mimbo yenatu o — wa'a	yemwidye
25. spouse	puitu	unya
26. son	imuru	umwe
27. dau.	yemwidye (yemure)	yemwidye (yemure)
28. grs.	ipwaru	ipwaru

29. grd.	ipwaru	ipwaru
30. spouse's bro.	pamuko	iyao
31. spouse's sis.	takano	yedote
32. spouse's fa.	imuru tamuru (son's gr. fa.)	umwetamuru
33. spouse's mo.	imurunote	umwenote
34. bro.'s wife	takano	yedote
35. sis.'s hus.	pamuko	iyao
36. bro.'s son	imuru	pwatumo
37. bro.'s dau.	yemwidye	pwase
38. sis.'s son	pwatumu	umwe
39. sis.'s dau.	takano	yemwidye
40. dau.'s hus.	pwarimye	pwarimye
41. son's wife	parisano	parisano
42. mo.'s bro.'s wife	wopuko	wopuko
43. mo.'s sis.'s hus.	papako	papako
44. fa.'s bro.'s wife	tatako	tatako
45. fa.'s sis.'s hus.	tamoshi, iyao (indefinite)	iyao
46. spouse's bro.'s son	pwatumu	umwe
47. spouse's bro.'s dau.	takano	yemwidye
48. spouse's sis.'s son	puitu pideme	pwatumu
49. spouse's sis.'s dau.	puitu pide emwidye	pwase
50. stepfa.	papako	papako
51. stepmo.	tatako	tatako
52. half-bro.	kamicho	kamicho
53. half-sis.	kami	kami

LIST II

RELATIONSHIP TERMS — MAN SPEAKING

(See fig. 7)

1. papa — fa.
2. tata — mo.
1a. papako — fa.'s bro.; mo.'s sis.'s hus.; fa.'s male parallel cousins
2a. tatako — mo.'s sis.; fa.'s bro.'s wife; mo.'s female parallel cousins
3. kami — y. bro.; fa.'s bro.'s y. son; mo.'s sis.'s y. son
4b tseo — o. bro.; fa.'s bro.'s o. son; mo.'s sis.'s o. son
5. mimbo yenatu — y. sis.; fa.'s bro.'s y. dau.; mo.'s sis.'s y. dau.
6. wa'a — o. sis.; fa.'s bro.'s o. dau.; mo.'s sis.'s o. dau.
7. tamoshi — grf.; grf.'s bro.

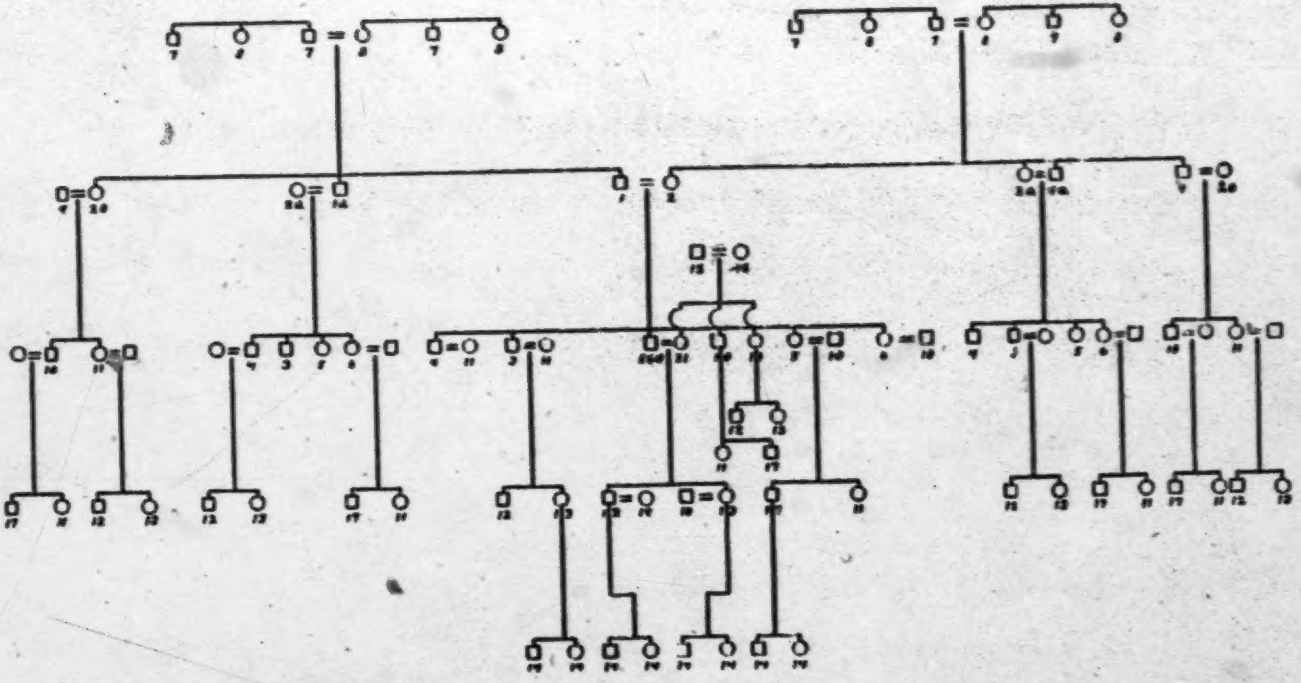

FIGURE 7

Diagram of kinship system, man speaking. Numbers refer to those in List II, Pages 87-88. Squares indicate males; circles, females.

8. pipi — grm.; grm.'s sis.
9. iyao — mo.'s bro.; fa.'s sis's hus.; mo.'s male parallel cousins
10. pamuko — fa.'s sis.'s son; mo.'s bro.'s son; wife's bro.; sis.'s hus.
11. takano — fa.'s sis.'s dau.; mo.'s bro.'s dau.; wife's sis.; bro.'s wife sis.'s dau.; wife's bro.'s dau.
12. imuru — son; bro.'s son; wife's sis's son
13. yemwidye — dau.; bro.'s dau.
14. ipwaru — grs.; grd. (son's child; dau.'s child)
15. imuru tamuru — fa.-in-law ("son's grf.")
16. imurunote — mo.-in-law ("son's grm.")
17. pwatumu — sis.'s son; wife's bro.'s son
18. pwarimye — dau.'s hus.
19. parisano — son's wife
20. wopui — fa.'s sis.; mo.'s bro.'s wife; fa.'s female parallel cousins (wopuko: men sometimes give this as tatako)
21. puitu — my wife

List III

RELATIONSHIP TERMS — WOMAN SPEAKING

(See fig. 8)

1. papa — fa.
2. tata — mo.
1a. papako — fa.'s bro.; mo.'s sis.'s hus.
2a. tatako — mo.'s sis.; fa.'s bro.'s wife
3. kami — y. sis.; fa.'s bro.'s y. dau.
4. wa'a — o. sis.; fa.'s bro.'s o. dau.
3a. kamicho — y. bro.; fa.'s bro.'s y. son
4a. wa'ako — o. bro.; fa.'s bro.'s o. son
7. tamoshi — grf.; grf.'s bro.
8. pipi — grm.; grm.'s sis.
9. iyao — fa.'s sis.'s son; sis.'s hus.'s bro.
9a. iyaoko — mo.'s bro.; mo.'s bro.'s son; fa.'s sis.'s hus.
10.
11.
12.
13. yemwidye (yemare) — dau.; mo.'s sis.'s dau.; sis.'s dau.; hus.'s bro.'s dau.
14. ipwaru — grs.; grd.
15.
16.

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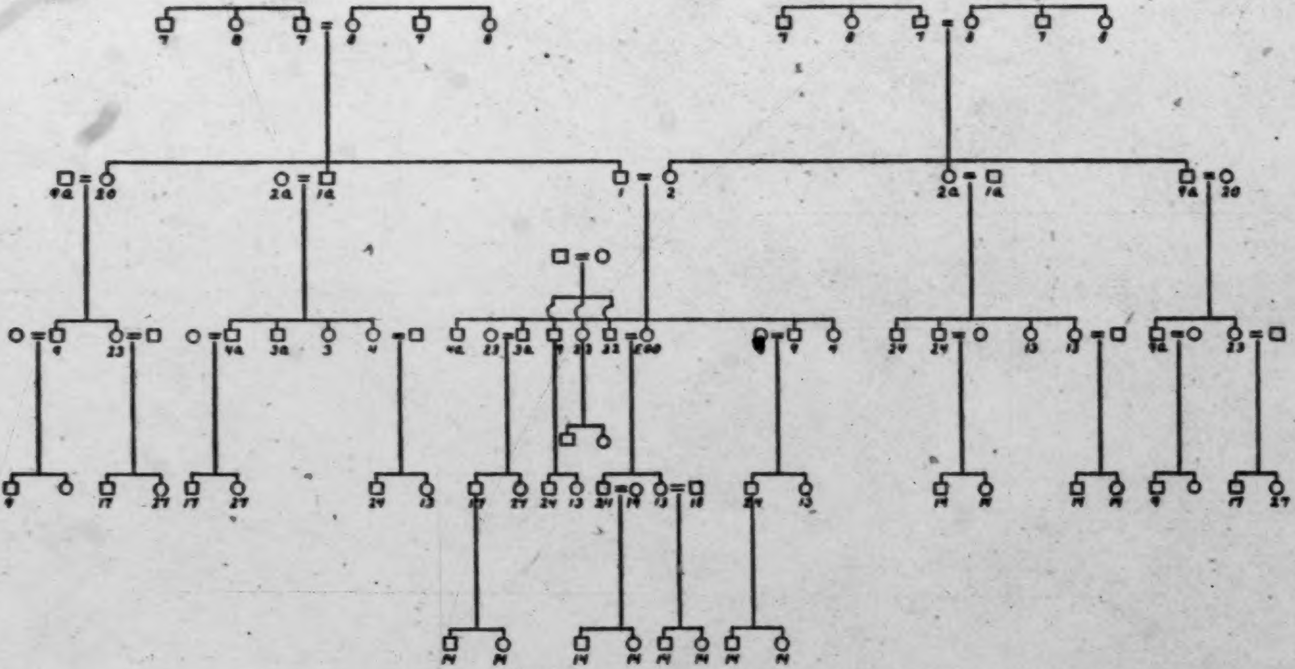

FIGURE 8

Diagram of kinship system, woman speaking. Numbers refer to those in List III, Pages 88-90. Squares indicate males; circles, females.

601 17. pwatumu — bro.'s son; hus.'s sis.'s son
18. pwarimye — dau.'s hus.
19. parisano — son's wife
20. wopuko — fa.'s sis.; mo.'s bro.'s wife
21.
22. unya — hus.
23. yedote — fa.'s sis.'s dau.; mo.'s bro.'s dau.; hus.'s sis.; bro.'s wife
24. uimwe (umwe, ume) — son; mo.'s sis.'s son; sis.'s son; hus.'s bro.'s son
25. umwetamuru — hus.'s fa. ("son's grf.")
26. umwenote — hus.'s mo. ("son's grm.")
27. pwase — bro.'s dau.; hus.'s sis.'s dau.

601 If we look for the active principles of the system in the three 582 "middle" generations (i.e. speaker's generation, first ascending, and first descending generations), we find that we have here a bifurcating system, in which relatives tracing descent through the maternal line are differentiated from those tracing descent through the paternal line. Marriage, if reflected in the terminology, is generally of the symmetrical cross cousin variety, with the exception that a man may marry his sister's daughter. This is a type of terminology, in other words, which at first glance is well adapted to a dual organization or a sib system. At the present time, how- 614 ever, there is not the slightest indication of the presence of sibs 174 nor of their former existence. Furthermore, no definite existence of sibs or dual organizations in Carib groups of an earlier time is to be found in the literature. Schomburgk, in speaking of the Macusi,[1] makes no mention of clans but says, "the uncle on the father's side may not marry the niece because she is regarded as next of kindred to the brothers and sisters, for which reason he also is called 'Papa.' On the other hand he is allowed to make ties with the daughter of his sister, the wife of a deceased brother and his stepmother when the father is dead." At the same time, it is hinted that descent is through the mother. However, the above mentioned marriage of a man with his sister's daughter would be contrary to the exogamic rule of a matrilinear clan, so that if any inference is to be drawn from the above statement of Schomburgk, it is that the Macusi are either patrilineal or that

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[1] Schomburgk, 1922-23, *Travels in British Guiana*, Vol. II, p. 252.

sib principles are not at work. The Carib of the Orinoco paid 614
little attention to descent.[1] Roth, on the basis of personal investigations 174
among Pomeroon Caribs, Akawai, Macusi, Patemona, and Taurepang (all Carib-speaking groups), was unable to find anything corresponding to group or family names which might indicate the recognized existence of sib groupings.[2]

The Macusi apparently possess, according to the somewhat 601
fragmentary information given by Farabee and Schomburgk, 614
a relationship system based on the same principles as that of the 171
Barama Caribs, but are also without a sib system. Kirchhoff, in discussing this problem in a recent and illuminating paper on the social organization of the tribes of northeastern South America,[3] says "the relationship nomenclature of the Macusi is clearly built on one principle, the separation of parallel and cross relatives. . . . This type of kinship nomenclature, which we have found here among a people without sib organization and without traces of an earlier sib organization, has been reported from very many people in all parts of the world (although not from all Kultur provinces or Kulturkreises), and as well from those without as from those with sib organization. This type has been regarded by ethnologists as characteristic for sib organization and as intimately and necessarily associated with its (the sib's) fundamental principles. As, upon further investigation, nomenclatures of this type were discovered among hitherto unstudied living peoples without sib organization, a search was begun for new connections and new clarifications. The result is the modern position, which has been universally accepted by the leading North American ethnologists. Even today, however, it has received astonishingly little attention in other countries due to the widespread lack of interest in all ethnological problems. [This modern position is] that this type of nomenclature is the underlying factor in certain problems connected with the levirate and sororate, and consequently is associated with the house group, with small relation to sib organization. . . . Tylor has explained this type on the basis of the dual organization. . . . However, this type has a very

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[1] Roth, 1924, *An Introductory Study of the Arts, Crafts, and Customs*, p. 673.

[2] Roth, 1924, *An Introductory Study of the Arts, Crafts, and Customs*, p. 675, "An old Pomeroon Carib gave me Turewi-o and Muru-wa as the only two alleged group names of his tribe that he could remember. While ignorant of their meaning or interpretation he assured me that they had nothing to do with sexual restrictions."

[3] Kirchhoff, 1932, *Verwandtschaftsbezeichnungen und Verwandtenheirat*, pp. 41–71. Translation by author.

614 wide distribution in the world, the dual organization a narrow
601 one, so that the general explanation of the type on the basis of
171 the dual organization is not applicable" unless one assumes the
later diffusion of this type of nomenclature or a former wider distribution of the dual organization, evidence for which is lacking.

601 The actual kinship usages among the Barama Caribs at the
587 present time support the view that, in the absence of sib organization, the terminology is closely connected with the customs of the levirate and the sororate. As has been mentioned elsewhere in this monograph, polygamous marriages are frequently sororal. Likewise, a widow usually marries a brother of her deceased husband. If these customs are not followed invariably at the present time, they nevertheless seem to be survivals of more stringent rules of former times. Informants state that sororate and levirate were invariable among the "old-time people." Unfortunately, while in the area itself, I did not have this problem well enough in mind to make a thorough census of marriages for the purpose of determining the actual incidence of the levirate and sororate in the total number of unions. However, practically all informants stated levirate and sororate rules in their descriptions of the choice of mates which are taken after the first marriage, indicating that this seems to be the conscious pattern, regardless of the actual behavior. In the twelve cases of polygynous marriages with the circumstances of which I was familiar, each of eight men had married his wife's sister. Of seven widows who had remarried, all had married brothers or parallel cousins (terminologically the same) of the deceased husbands.

601 Now the distinction between cross and parallel cousins and
582 the prohibition of marriage with the latter, which is one of the fundamental principles of the Barama Carib system, as can be seen from the equivalences of affinal relatives (Section B, Analysis of the Relationship System), is an obvious necessity in a society in which both the levirate and sororate are actively functioning. The implications are obvious.[1] In many cases marriage with a child of the father's brother or mother's sister in such a society would mean marriage with an actual half-brother or half-sister.

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[1] Cf. Lowie, 1919, *Family and Sib*; Lowie, 1920, *Primitive Society*, Chap. 8; Sapir, 1916, *Terms of Relationship and the Levirate*, pp. 327–337. Somewhat same viewpoints are expressed in Kroeber, 1909, *Classificatory Systems of Relationship*, pp. 77–84; Radcliff-Brown, 1930, *The Social Organization of Australian Tribes*, p. 427 ff.

Such incestuous marriages, with a very few exceptions, are pro- 601
hibited throughout human society.[1] 582

On the other hand, marriage with a cross cousin, while occurring about a third of the time in the geneologies, is not prescribed in the system. It is true that the spouses of one's siblings and parallel cousins are addressed by the same terms as cross cousins (e.g. sister's husband is pwatumu, brother's wife is takano), but in actual usage among the Caribs these terms for cross cousin have no true implication of blood relationship. It would be more proper to translate the terms takano (female cross cousin, man speaking) and iyao (male cross cousin, woman speaking) as "marriageable." In other words, a Carib man will address any woman whom he does not know definitely to be a parallel cousin or sister as takano, a Carib woman will address any man as iyao whom she knows is not her brother or parallel cousin. Any individual called by these terms is a possible mate. All other persons are impossible as mates. I, being a stranger, was frequently called iyao by the women. This is not to say that the Caribs do not generally know which individuals are their cross cousins by blood relationship, but it simply means that no terminological distinction is made between true cross cousins and other marriageable persons. Such extension of terms is entirely inconsistent with a dual organization.

A further indication that the kinship terminology is unconnected 601
with a former sib or dual organization is the indifference displayed 614

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[1] This is not the place to enter into an elaborate theoretical discussion of incest tabus. We 835
may, however, offer an explanation of their origin which does not depend on a supposed inherent repulsion against incest nor upon the presence or structure of the sib group. Assume, for the sake of making the point clear, that marriage was originally practised between brothers and sisters. It is the nature of things that all marriages could not be of this type over a considerable length of time. In the first place, the number of brothers and sisters is not equal in every human family. Some persons would therefore be obliged to seek mates outside the immediate family. In the second place, individual preference in some cases would naturally dictate the choice of a mate from those who were not numbered among the brothers or sisters of the chooser. Again an outside marriage would take place. Once an individual has married outside his family he has doubled his social resources; he has two families behind him instead of one; and the two groups united in the marriage have a basis therein for common interests. In the competition for survival which takes place among individuals and among families in all human society, even today, the person who married outside his family, and his family itself, would be in a stronger position than those who married siblings and families in which this was the only type of marriage. Thus two types of family would arise to compete against each other, the exogamic and the endogamic. Because of their greater social influence, which would of course be strengthened with the development of property concepts, the exogamic families would presumably force the endogamic families into extinction. At least they would force the practise of family endogamy into extinction. Before this had become complete, however, the exogamic families would have imposed a formula to define their position, as is the universal practise of all social institutions. This formula would have been the incest tabu. By the time the exogamic family had completely eliminated the endogamic type, the incest tabu would have become an integral part of the family structure. Viewed in this light the incest tabu may be considered as a social rather than a biological restriction, imposed by the successful exogamic type of family during the course of its social competition with the endogamic type of family. With the later rise of sib concepts the extension of the tabu, in certain cases, would arise naturally.

601 614 is the terminology concerning the lineal affiliations of the grandparent's generation and of the grand-children's generation. As explained above, the separation of the maternal and paternal lines in the three "middle" generations is a natural reflection of the incest tabus which arise in a society in which the levirate and sororate are actively functioning. Under such conditions terminological distinctions are functionally necessary in the three middle generations, but are merely superfluous in the grandparents' and grandchildren's generations. On the other hand, if the system were based on a sib organization, a host of economic, religious, and social factors would demand a recognition of the linear affiliations of the members of the grandparents' and grandchildren's generations, if these generations were recognized at all. Such a lack of interest in the linear affiliations of the second ascending and second descending generations, as displayed in the Barama Carib system, is wholly foreign to the systems of the majority of sib organizations of which we know.

601 587 We may summarize the facts favoring the contention that the Barama Carib kinship terminology, which distinguishes the maternal and paternal lines only in the three "middle" generations, is connected with the levirate and sororate rather than with a sib or dual organization. 1. The levirate and sororate are still actively functioning, while there is no evidence of a present or former sib grouping. 2. Indifference is displayed in the terminology concerning the linear affiliations of the members of the grandparents' and of the grandchildren's generations. 3. Cross cousins are equated with all marriageable persons, whether demonstrably related by blood or not, a usage inconsistent with a strict dual organization.

603 591 The failure to distinguish sex of grandchildren reflects the break-up of the family which occurs as a result of extralocal marriage. Informants displayed great difficulty in remembering their grandchildren, because, as they said, their children move away after marriage and they lose track of their grandchildren. It will be remembered that marriage is matrilocal only until the birth of the first child. Birth and rearing of grandchildren usually takes place in a settlement removed from that of the grandparents. The average old man or woman will have difficulty in telling how

many grandchildren he or she has, and if the number is remem- 603
bered, the sex of the several grandchildren is often vague. This 591
state of affairs added no little to the difficulty of obtaining genealogies. The grandchild is characteristically not a real person of the grandparent's experience.

Grandparents, on the other hand, are much more real personalities to their grandchildren than the reverse. Even if a grandchild seldom sees the grandparent in the flesh, the older individual's personality is impressed upon the child through the conversation and allusions of the parents. Hence, it is natural that the grandparents are distinguished according to sex.

A further peculiarity of the system is to be noted in the provi- 582
sions made permitting the marriage of a man with his sister's 604
daughter, a type of marriage which has also been reported from 171
the Carib Tamanak, Macusi, Galibi, Island Carib, Cumanagoto, Chayma, and Palenke, as well as the Coastal Tupi.[1] Among the Barama Caribs a man calls his sister's daughter takano ("marriageable" or cross cousin), and a woman calls her mother's brother iyao, the term which she uses for all men whom she may marry. Consistent with this usage is the fact that a woman calls the children of her mother's sister by the same terms which she uses for her own children and the fact that she calls children of maternal parallel cousins by the same term which she uses for her own grandchildren. Two cases of marriage between a man and his sister's daughter were noted in the area. At the present time it seems to be an archaic type of marriage. "Marriage with the sister's daughter," says Kirchhoff,[2] "is, aside from the jungle tribes of South America, known only among a number of mostly Dravidian tribes and castes of India and among the Tungus of East Siberia. . . . The Carib sources are clear only on one point, namely, that it is among them (as also among the Coastal Tupi) a deep-rooted system. On the other hand, the sources from the Coastal Tupi supply thorough going information among which statements concerning this custom can be found. We find, thus, two wholly different situations reported in which this form of marriage is customary. . . . In the first place, this form of

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[1] Kirchoff, 1932, *Verwandtschaftsbezeichnungen*, and Kirchoff, 1932, a, *Die Verwandtschafts organisation der Urwaldstämme Südamerikas.*

[2] Kirchhoff, 1932, *Verwandtschaftsbezeichnungen*, p. 58. Translation by author.

582 marriage frees a man from having to work for his spouse. . . .
604 The relatives of a woman acquire through her marriage not only
171 a servant in the person of her man, but also in her daughter a
woman for whom one does not need to serve (because of her father's prior obligations to the family of his wife). The taking of this daughter makes a man free of a part of his obligation." Another explanation for the usage is reported from the Tupinamba (Coastal Tupi) on the authority of Soares de Souza, according to Kirchhoff. Here a man marries his widowed sister's daughter as a means of providing for the widow, and thus bringing him and her under the same roof. Of the two motives here mentioned which might have given rise to marriage with sister's daughter, the first appears to be applicable to the Barama Caribs in preference to the second, which is not compatible with the usage of the levirate.

601 One term in the Barama system I am unable to explain and believe that it must be regarded as an error. This is the term wa'ako which a woman applies to her older brother, the same term being applied by both men and women to older sister.

171 In concluding our remarks on the Barama Carib system as
614 such, we may point out that its general principles have been found
587 to be characteristic of the other Carib groups in South America.
According to Kirchhoff's survey of the social organizations of northeastern South America, the Caribs are characterized by the following usages: (1) Absence of sibs or dual organization; (2) distinction, based on levirate and sororate, in the three middle generations between maternal and paternal lines; (3) impermanent
[591] matrilocal marriage.[1] The Arawak groups, on the other hand, seem to be characterized by matrilocal marriage and an organization of matrilineal unlocalized sibs, which among the Lokono at least are organized into exogamic moieties. The Uitoto and Bora have patrilocal marriage and patrilinear localized sibs.

602 In the light of usages involved in the kinship system we see
612 that a Barama Carib recognizes one group of his relatives, the
"parallel" relatives, more definitely than other relatives. The latter are terminologically undistinguished from other persons.

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[1] Kirchhoff, 1932, a, *Die Verwandtschaftsorganisation*. This author has examined the literary sources dealing with the following Carib groups: Tamanak, Macusi, Taulingpang (Arekuna), Yekuana, Ginau, Aparai, Rukuyenne (Oyabs), Galibi, Kallinago of the Lesser Antilles, and Cumanagoto. Among the Aparai marriage is said to be patrilocal.

These persons, whom a man calls "brothers" and "sisters," remain 602
in a special relationship to him throughout his life. As will be 612
seen in the study of the village of Sawari (following chapter), "brothers" tend to group together to form a settlement and assist one another in social and economic affairs in the settlement. They support one another in feuds and retaliation. A woman's brothers support her against a cruel or lazy husband. In all activities the members of the group of parallel relatives cooperate more closely than do other relatives. Membership in the group begins at birth and continues for life. Due to the customs regulating residence after marriage, there is no necessary connection between locality and the kin.

The Extended Family. A third type of grouping is the extended 596
family, the immediate family which is, in other words, extended 606
by marriage of its members. When a girl marries, her husband becomes, for a time at least, intimately associated with her family, because of the custom requiring the husband to perform services before marriage under the eye of his future father-in-law and after marriage to live in the father-in-law's settlement, usually at least until the birth of the first child. Thus a family, upon the marriage of its daughters, from one point of view undergoes a special transformation consequent upon the addition of strangers in the persons of sons-in-law. The sons-in-law, however, do not take the place of the sons who through marriage have joined other extended families. The husbands of the daughters are not taken into the family, which still maintains its biological limits and individuality. This is shown by the fact that special deference is paid to parents-in-law. During the period that marriage remains matrilocal, the sons-in-law cooperate actively with the fathers-in-law and with other members of the latter's families who still remain at home. Later opportunity or preference usually impels the younger man to move elsewhere, but a bond still remains between the husband and his wife's kindred which is reflected in mutual cooperation. This bond is, however, slighter than that uniting a man and his parallel kin. With the death of the wife or of the father-in-law mutual obligations are considered ended.[1]

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[1] "Among the Roucuyenne and Orinoko Caribs an extensive connection between fathers-in-law and sons-in-law has arisen which has led to a regular hierarchy of graded affinal relations." Kirchhoff, 1932, a, *Die Verwandtschaftsorganisation*, p. 189.

621 **The Settlement.** The political unit of Barama society is the settlement, and its basic principle is the common locality of its members. Settlements vary among themselves in size from seven to seventy individuals. A typical settlement is analyzed in detail in the following chapter on Sawari. Factors which determine membership in this group are kinship, friendship, marriage, and accident of birth. Termination of membership is by individual choice, sentiment of the community antagonistic to the individual in question, death, and non-social reasons such as exhaustion of 622 554 the soil and of the hunting grounds. Each settlement is presided over by a headman whose authority is decidedly limited and dependent upon the force of his personality or physical strength. The headman is generally chosen by acclaim for life, or for the existence of the settlement, by the adult men of the group. Community affairs are decided informally, in conversation among the adult men when they are together during drinking sprees. Thorough discussion of the various functions of the settlement may be found in the chapter on the Settlement of Sawari.

621 103 The settlement is usually called by the name of the creek nearest its location. The names of the principal settlements on the Barama are herewith given, with their literal translations.

Aranka — orange
Barama — no meaning
Huri — a fish (*Hoplias malabaricus*)
Kariako — a small deer
Kokerit — a palm tree (*Maximiliana regia*)
Kurasani — an old man went fishing late in the afternoon and saw something in the water. He ducked into the water saying the word "kurasani" as an exclamation of surprise. It has no other meaning, but since that time the creek near where this occurred has been called Kurasani. It is claimed that he saw a supernatural ant-bear which is called tamanua.
Kwamata — bamboo
Kurewa — a leguminous plant which grows in second-growth jungle
Massawini — bright (clear) water, shining water
Parapimai — from parapi, plate; a man dropped a plate in the water and named the creek accordingly
Sawari — a nut-bearing tree (*Caryocar Pekea tuberculosa*)
Sineparu — a bush rope

Takatu — white water 621
Tasawini — clear water (puristically: tasiyainye) 103
Teki — green (creek)
Turingbang — thundering noises from the ground (referring to rumble of the river or of a rapids at this point)
Wanamu — large turtle
Waramaishuru — mokru creek
Yakaishuru — kasi fish creek
Korotoko — chicken
Haiari — a fish poison (*Lonchocarpus* sp.)

Groups of Friends. Friendship is a strong factor in the social 572 life of both men and women. Regardless of home, kinship, or settlement, individuals are often especially intimate with other individuals for no other reason than personal congeniality. For practical purposes this form of grouping often lies within the settlement, although I know of cases of men making rather extended tours to visit distant friends. There are always groups of men friends who go hunting together, who build canoes together, tell jokes together, and so on. The same sort of thing is true among the women, who, however, due to modified matrilocal marriage, tend to choose their friends from among their relatives to a greater extent than do the men. In the matters of lending, assistance in work, and sociability, friendship plays at least as large a functional part as does mere kinship, which, when it stands alone, implies for the most part, as among ourselves, rights and duties frequently less vital than those of friendship. The difference of course lies in the fact that friendships may be terminated when for any cause the congeniality essential to them disappears, whereas kinship ties exist in a stronger or weaker condition for life.

The Kanaima Cult. One of the most intriguing forms of organi- 794 zation is the secret kanaima cult, which will be discussed in some detail in our section on Crime and Punishment. In some form or other it has been reported from many of the Indian tribes of Guiana, without reference to linguistic divisions. From the social point of view the membership of the cult, if such actually exists, represents an important, though perhaps temporary, division of the population, a group which is, however, outside the limits of nor-

794 mal society. The motivations for joining the kanaima cult are, apparently, first, failure to obtain redress for a wrong in other ways, and second, generally antisocial attitude. Membership is limited to the male sex. It is seldom that a kanaima reforms and gives up the life.

571 **Summary.** Six types of social grouping have been described. The first five types, immediate family, kin, extended family, friendship group, and settlement, may be considered basic elements of the social structure. The kanaima cult is a specialized grouping not directly connected with the social organization of the community as a whole.

Two factors, which are present in all societies, namely, age and sex, further affect the social life of a Carib community. Here, as elsewhere, among human societies, are infants, adolescents, middle aged adults, and old people. Here also are males and females. However, no groupings in Carib life depend primarily upon either of these factors. Both sexes and all ages are present in the immediate family, kin, extended family, and settlement, although in each of these groups the degree of cooperation between specified individuals is positively correlated with the degree of similarity between them in regard to age or sex or both. Friendship groups are usually composed of individuals of the same sex and the same generation. The kanaima cult is composed only of men, although of varying ages above that of maturity.

565 It may be asked why headmen, priests, and sorcerers, respectively, are not assigned to special groups. Although each of these officials is distinguished from the commonality on account of his position, each is a lone wolf in his official capacity, requiring in his functions the assistance of no organized group of colleagues. Furthermore, each settlement has only one headman and usually not more than three priests and sorcerers, so that a local basis for grouping is absent. In the frame of Carib society as a whole, these three officials may be said to belong respectively to three professional classes, but these classes are not in any sense functioning social groups because the members, although fulfilling similar individual functions, do not cooperate in them.

OF BRITISH GUIANA

SAWARI

After five or six days of paddling up the Barama from the Great 621
Falls at Towakaima, a river party watching for such things may see an opening in the underbrush on the right bank of the river. Near it on the ground, a woodskin will be lying bottom up among the bushes; cutlass slashes disfigure the bark of the nearby trees, and perhaps the pole of a set-line will be protruding from the water. Coming down to the water's edge is a path stippled with the prints of many bare toes.

In the arduous journey from the Falls only two other such signs of human life will have been seen the landings of the Kurewa and of the Kwamata settlements. And the traveller, who in this unmapped region relies upon the sketchy reports of the Caribs, will hope that this is one of the landings of the village of Sawari. As a matter of fact, it is.

Going ashore, the newcomers will follow the trail inland for perhaps a mile and, if not led astray by the numerous diverging paths in the dense jungle, will in due time arrive at a clearing where the ballidanna thatches of half a dozen Indian houses face the open sky. The houses seem to lie in the bottom of a green crater, for the wall of the jungle rises abruptly to a height of eighty to a hundred feet on all sides of the clearing, which is roughly elliptical in shape, two hundred and six feet long by one hundred and thirty-six feet wide.

Visitors "knock at the door" of a strange settlement by striking the mora trees along the p[illegible] with their cutlasses. Apprised of the approach of strangers by these warning booms and by the barking of the settlement dogs, men and women of Sawari, clad only in loin cloths, will be waiting outside their houses to receive.

John Miller, the headman, a tall virile fellow with little blood- 609
shot eyes and a crooked left arm, long ago reduced to a mass of 142
scars by the shotgun of a jealous Carib husband, will probably 621
be there, surrounded by the three women of his household. Old Mary, toothless and wrinkled, with black hair streaming about her leathery shoulders and flap-like breasts, will stare unemotionally. Elizabeth, young, buxom, well rounded, and smooth-skinned, will perhaps linger modestly but inquisitively in the background, fingering the brass pin whose point projects outward a half inch

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from her perforated under lip. Charlotte, who is a young girl but recently come to adolescence, may walk about the new-comers with naïve curiosity. Old David, the medicine man, with the elbow of his paralyzed right arm grasped in his left palm, will emerge from his small house north of Miller's large one, smiling slightly as a drop of water trickles down his wrinkled cheek from his rheumy right eye. With him will be his wife, Elizabeth, whose flat exhausted breasts afford the only indication of the encroach-

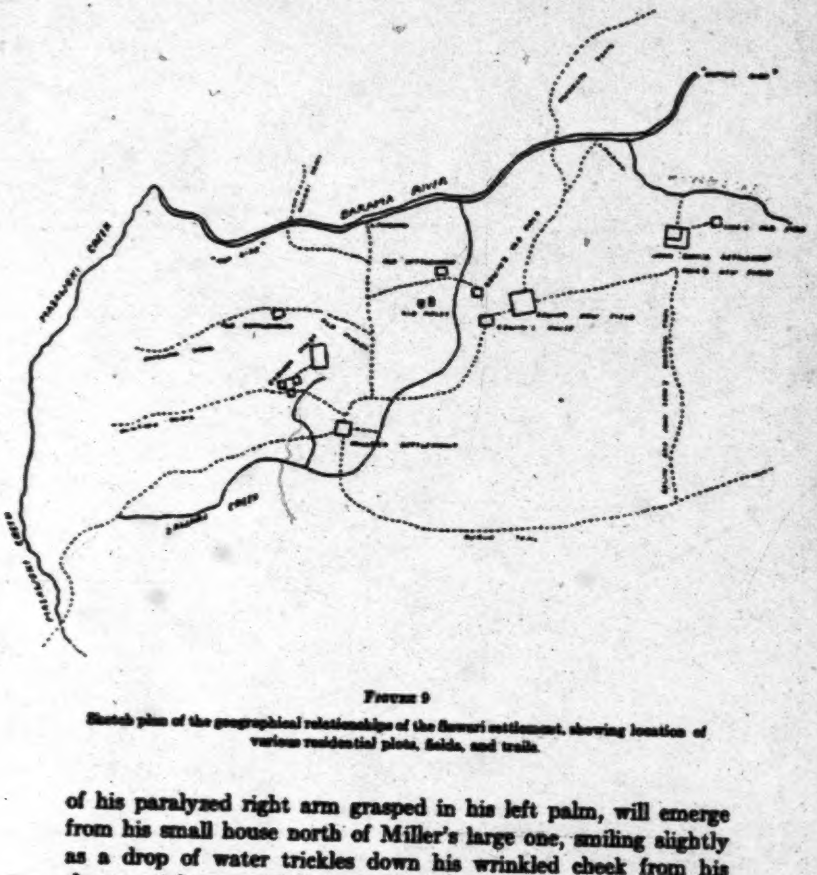

FIGURE 9

Sketch plan of the geographical relationships of the Sawari settlement, showing location of various residential plots, fields, and trails.

ment of old age on a sturdy body. Columbus, a husky young man, 142
and his wife, who has not yet reached puberty; small-boned, mus- 621
cular Samuel and his large buxom wife Elizabeth, who is Miller's 609

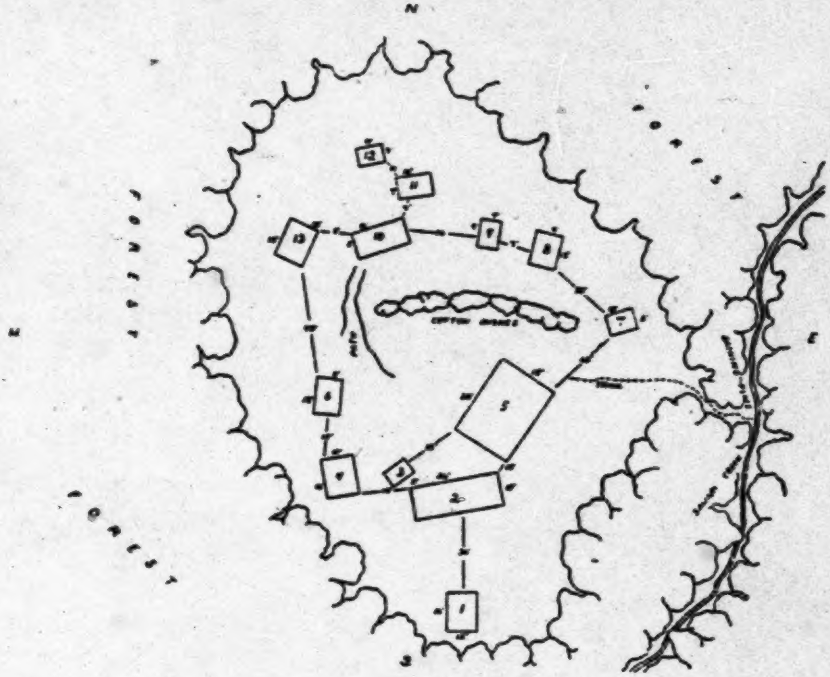

Figure 10

Sketch plan of "Miller's Clearing," Sawari settlement.

sister; sprightly middle-aged Caroline, another sister of Miller, and many little naked boys and girls will be in the welcoming party.

While the visitors and the Sawari people are smoking and exchanging small talk, someone will have slipped out to the other

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two clearings of the settlement with the news, for in a short time raw-boned John Cook will appear in his ragged bathing trunks, the end product of a complicated series of trading deals starting

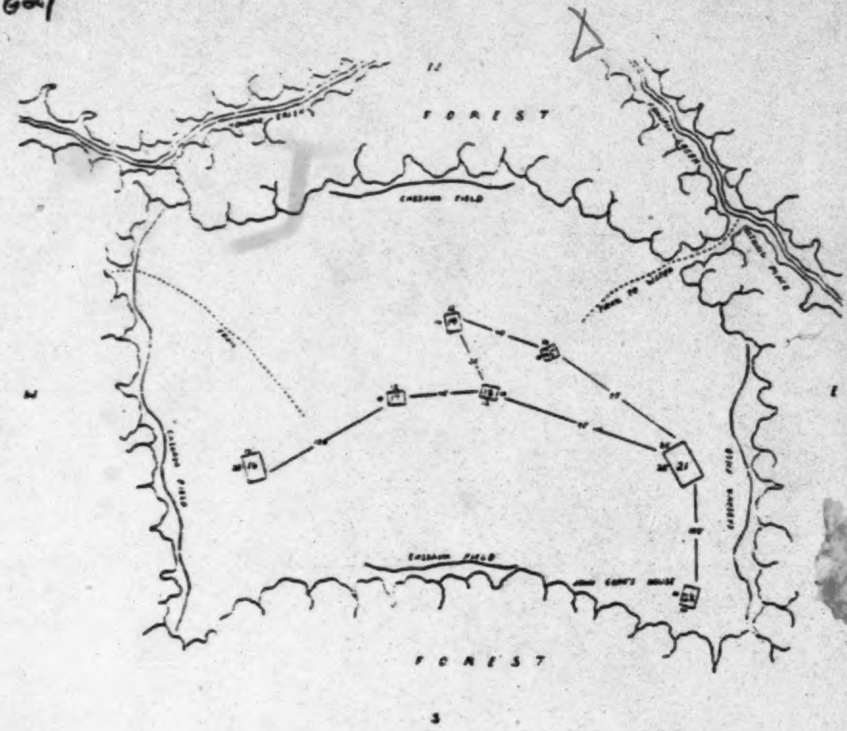
N
FOREST
CASSAVA FIELD
W
CASSAVA FIELD
21
E
CASSAVA FIELD
JOHN COOK'S HOUSE
FOREST
S

Figure 11

Sketch plan of "Edwin's Clearing," Sawari settlement.

at the coast. Big Edwin will lumber in, his slightly crossed eye focused at ambiguous points in the atmosphere. The young buck, Henry Daniel, Daniel and John, who live in John Cook's clearing, and a dozen wives and children will appear. Everyone will go to John Miller's house, the biggest in the settlement. Men will climb into hammocks or sit on stools and logs about the floor. Women will gather at the other end of the house and look on

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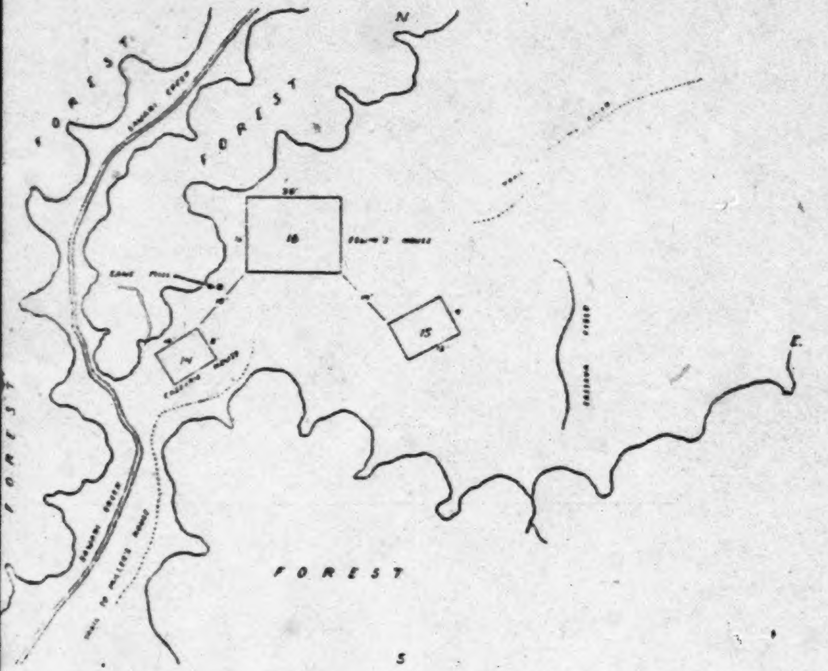

Figure 12

Sketch plan of "Cook's Clearing." Sawari settlement.

inquiringly from the distance. Even the children will be smoking the visitor's tobacco, earning it by carrying glowing fire-sticks from the fire under the pot in the corner. A long time will be spent in talking. . . .

621 162 **External Contacts of the Settlement.** The Sawari settlement, with a population of twenty-six adults and twenty-one children, includes three residential clearings and several associated agricultural fields or gardens. As can be seen from Figure 9, a nearly straight line running from northeast to southwest can be drawn through the three clearings where the people live. The clearing occupied by John Miller, the headman of the whole settlement, lies farthest to the southwest. About a half-mile northeastward, separated by intervening jungle, is the house clearing of Edwin. And perhaps three-quarters of a mile northeastward of Edwin's house lies the clearing for the houses of John Cook, Henry Daniel, John and Daniel. This arrangement of the several divisions of the community is reflected in the social positions of the members affected thereby.

103 As is the case with all Carib settlements on the Barama, Sawari takes its name from the creek where the people get their water supply. The Sawari Creek, so named from the numerous sawari-nut trees (*Caryocar Pekea tuberculosa*) which grow along its banks, flows south of Miller's clearing, passes east of Edwin's clearing, and empties into the Barama at a point almost directly north of the latter.

361 Outside contact at the time of my appearance at Sawari was maintained with the settlements of Haiari and Kwamata across the river, and with Kurewa, which lies about midway between [487] Sawari and Towakaima itself. (See Figure 1.) An old trail running southwestward to the higher settlements of the upper Barama had not been used for several years, and the Sawari Caribs were completely out of touch with those farther up the river.

484 This section of the country is unmapped, and reliable estimates of linear distances are impossible without instruments because of the meandering courses which both the jungle trails and the streams pursue. Consequently, distances are usually spoken of by the Indians in terms of the length of time required for a reasonably swift man to cover them. On this basis Haiari is three hours (361) distant, but men travelling with loads usually take at least five hours or half a day. Kwamata is about six hours. Kurewa is about twelve hours, a long day away.

177 361 The source of such European influence as exists in this region is Towakaima. On the left bank of the river, at a distance of about

a mile and a half below the Great Falls, is the "shop," or trading 177
post, owned by Chee-a-Fat, a Chinese man of business whose 361
base of operations is at Aranka on the Barama River. Aranka is
twenty-nine and three-fourths miles distant from Towakaima via
the now dilapidated government trail, which was built to connect
the two rivers during the hey-dey of the gold rush. At the time of
my study, the shop at Towakaima was in charge of one James
Cook, a negro, and it boasted a very small and depleted stock of
staple goods. The other "foreign" resident of Towakaima is
Mr. H. Pestano who lives on his land grant of five acres, leased 115
from the government. Mr. Pestano is a literate Portuguese Creole,
formerly residing on the Berbice Coast. Mrs. Pestano, the daughter
of a negro prospector and a Carib woman, is acquainted with the
contemporary cultures of both of her ancestral stocks. Both the
Pestanos are thoroughly versed in the ways of the Caribs and
well liked by them. Many of Mrs. Pestano's relatives live in the
Barama settlements. To the Pestanos I owe my thanks for valuable
assistance in my efforts to understand the Carib culture.

Towakaima, in the days of the gold rush, was the station of a 175
government warden, and the ruins of his house and office now lie, 177
barely discernible among the ravages of wood ants and tropical
decay, in a rank second growth of jungle near Mr. Pestano's
present wattle and thatch house. During the period of mining
activity, ended about 1912, Towakaima was apparently a vigorous
outpost of civilization. I am told that in highwater Sproston's
launch made regular trips up the Barama to this point,
and that the now decrepit trail to Aranka, on the more easily
navigable Barama, was fit for wagon traffic. About 1910, we
hear, the firm of Farnum and Smyth had a shop for a period of
a year on the Anamu, and regularly hauled tent boats over the
falls by means of rollers and rope and tackle. These facts are
mentioned in order to give a complete picture of the possible
external influences which the inhabitants of Sawari may have
felt. Even during the period of Towakaima's efflorescence, however, 177
Sawari appears to have remained off the beaten path, still
a day's walk through the bush beyond Farnum and Smyth's shop.
And, so far as the Indians and other informants could say, white
men had never visited Sawari previous to my appearance there,
and it has been relatively free from outside contact. Nevertheless,

177 during my stay in the settlement a visit was made by one Charles Bell, a negro prospector who was working alluvial gold near the settlement of Haiari, and it is not improbable that other negroes have visited the place. Therefore, the statement that Sawari had hitherto been spared the visit of a white man does not eliminate the fact that some European cultural influence has trickled through. However, continued and intensive contact must be present to affect radically the lives of these people who live in the depths of the forest; and at present only the shop and the Pestanos at Towakaima afford tangible media for these influences. John Miller, the headman of Sawari, spent three years in hospital and jail in Georgetown, as related later in this section. His contact with civilization seems to have had no important cultural effect on Sawari.

487 Towakaima may be reached from Sawari by any one of three different routes. First, in two days of fast hiking one can travel from Sawari to Towakaima by the trail through the bush south of the river. This trail passes through the settlement of Kurewa. My party, with eighty-pound loads on their backs, required two days and a half to negotiate the distance on a forced march. Second, by trail north of the river through the settlement of Kwamata, Towakaima may be reached, with loads, in two days or slightly less. And third, by river, two to six days are required, depending upon the height of the water. Coming up the river in the third week of December, with water at middle height, our party required six days.[1]

621 **Physical Plan of the Settlement.** Sawari comprises three residential districts or clearings, lying on an approximately straight, but imaginary line, running roughly northeast to southwest. I shall designate these three divisions in English as the Caribs do in their own language, John Miller's clearing, Edwin's clearing, and John Cook's clearing.[2] Figure 9 shows the general plan of the entire Sawari settlement.

Nearby Miller's clearing are three fields which are at present

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[1] The official government map in the archives of the Department of Lands and Mines in Georgetown, a tracing of which was supplied to me through the kindness of the Hon. John Mullin, shows blank the territory of the upper Barama between the Anamu and Baramita Rivers. The course of the river as drawn is marked "supposed course of the Barama." During the river journey from Towakaima to Sawari the Harvard Expedition encountered river rapids of sufficient size to necessitate portaging the loads of the expedition's corials. These rapids, as well as the ranges of the hills which must be crossed on the Kwamata line, form effective barriers to more frequent intercourse.

[2] John Miller and John Cook say that they have been officially baptized by a missionary at Aranka. Other members of this settlement, as is the case with all the Caribs on the Barama, also have English names because of tabus which limit the use of their Carib names, even among themselves. For the sake of clarity the English names will be used here.

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in use, and two in the process of being cut. Edwin has an agricultural field in the clearing about his house and a newly cleared but unplanted field about a quarter of a mile northeast on the trail to the river. The houses of John Cook's group are set in a large newly planted field, a short distance from a recently abandoned agricultural clearing formerly used by Cook.

The clearing in which John Miller's and associated houses are located is elliptical in plan. Its largest axis, running north and south, measures two hundred and six feet. It is one hundred and thirty-six feet wide at point of greatest breadth. This open space in the jungle, of perhaps an acre, contains thirteen buildings.

In Figure 10 these buildings are designated by number. The normal use of the respective buildings is as follows.

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Building	Use	Adult Occupants		Child Occupants (not yet pubescent)	
		Male	Female	Male	Female
1	Residence	Henry	Caroline		Margaret Elsa
2	Storehouse and workroom, formerly Miller's residence				
3	Drink house, shelters trough in which liquor is kept				
4	Residence	Samuel	Elizabeth		Katrina Mary
5	Residence	Miller	Mary Elizabeth Charlotte	Adolphus Charlie	Julia Christina Baby girl
6	Partly completed residence being built by Henry for Caroline				
7	Residence	Columbus			Susan
8	Residence	Joseph	Cecelia		Edna
9	Drink house				
10	Residence	David	Christina	Frederick	
11	Residence	Joseph			
12	Unoccupied				
13	Residence		Margaret		

621 162 Edwin's clearing is shown in Figure 11. It embraces three buildings, which are numbered on the Chart.

342 Adjoining Edwin's clearing to the north and northeast lie his fields. The area about his house, which is clear and unplanted, is roughly elliptical in shape and measures one hundred and thirty feet by ninety-five feet.

EDWIN'S CLEARING

Building	Use	Adult Occupants		Child Occupants	
		Male	Female	Male	Female
14	Drink house sheltering liquor trough				
15	Small benab used as kitchen and as sleeping quarters for guests				
16	Residence	Edwin	Lulu	boy	girl girl girl

John Cook's is shown in Figure 12. It is the largest single clearing in the settlement, measuring nine hundred and fifty by six hundred and eighty feet. It is entirely planted with cassava and other crops, except for small areas around the seven buildings.

Sawari thus comprises a population of forty-seven individuals, of which twenty-six are adults and twenty-one children. Of the whole group, twenty are males, and twenty-seven females. There are thirteen men and seven boys; fourteen women and thirteen girls.

361 162 To my knowledge, there were in the winter of 1932-33 a total of thirty-three Carib settlements on the Barama (Fig. 1). Of these I visited twenty-seven. According to my estimates, they range in size of population from seven (Waikarabi) to about seventy (Aranka at full strength).

621 **Consanguineal and Affilial Relationships** The settlement of Sawari is typical of the Carib villages on the Barama except for

its greater relative isolation and freedom from outside influence. 621
It lies in the region of the upper Barama which is out of the sphere of operations of the gold prospectors who come up the river from the Waini and the coast. On the other hand, it is out of touch with those settlements higher up the Barama, which have been culturally and physically influenced by contact with the residents of Venezuela. Because, therefore, Sawari appeared to be relatively "pure" in regard to its culture and the physical type of its residents, it was chosen as the settlement to be most intensively studied.

JOHN COOK'S CLEARING [342]

Building	Use	Adult Occupants Male	Adult Occupants Female	Child Occupants Male	Child Occupants Female
17	Residence	Henry-Daniel	Mary		girl baby
18	Abandoned residence				
19	Residence	John	Rose	boy boy	
20	Drink house				
21	Store and utility house, former residence				
22	Residence	Daniel	Elsie		
23	Residence	John Cook	Laura	boy	girl

In this section we are endeavoring to analyze the community 101
life of Sawari as it was from December, 1932, to March, 1933, the 121
period during which it was under my observation. The situation is taken as it stood, with little attempt at historical analysis, because of the paucity of historical material. I shall simply endeavor to illumine the functioning of social life in this village as a basis for

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the understanding of Barama Carib social life in general. Carib life exhibits little institutionalism or formalism that is visible to the naked eye, little that is self-explanatory at first glance. What we desire to understand, therefore, are the factors which cause individuals to live together in a community, the factors which tend to disrupt the community, and the extent of compromise and methods whereby a balance is maintained between these opposing factors so that the stability of the group is maintained. We also wish to know how the life of the individual is enriched by community life and how the activities of the individual are coordinated with those of the group.

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Let us first examine the blood relationships of the members of the settlement. In Figure 13 (at the end of the book) the blood connections of the several residents of Sawari are indicated. Here are given the English names of all individuals in the group who possess such designations, together with the terms of relationship used by Miller, the headman of the settlement, in addressing each individual. The relationship terms were checked through other men and women, and the blood lines were laboriously traced in pidgin English and through an interpreter. Even so, I am not satisfied that the chart completely represents the situation, inasmuch as one of the blood lines could not be traced satisfactorily with the linguistic resources at my command; and I am unwilling to project a geneology from the relationship terms alone. Therefore, the group of brothers composed of Samuel, Columbus, and Henry Daniel, lack precise antecedents in the chart. It was stoutly maintained that these three men came originally from another settlement and that they are distant cousins of Miller. The latter calls them pamuko, the term for male cross cousin, but I was unable to obtain a coherent explanation of the exact connection, so I have preferred to leave the connection indefinite in the chart. Since they are considered blood relatives by Miller and his group, I have so designated them on the chart.

On the chart are indicated five lines of blood relationship. Thus, Miller is demonstrably related by blood to twenty-five of the forty-seven members of the settlement (indicated by solid line); if we include the three above named brothers, Miller is the blood relative of twenty-eight members of the population. John Cook is the blood relative of six members of the settlement (indicated

by dash line). David is the blood relative of six members of the 601
settlement (indicated by dot-dash line). Mary, the sister of 621
Miller's deceased wife, is related by blood to seven individuals (indicated by dotted line). Christina, David's present wife, and her sister Margaret make up the fifth blood group (indicated by a line composed of dashes interspersed with two dots). Unconnected with these five blood groups are Rose, wife of John, and Lulu, the wife of Edwin.

Now it is certainly possible that all the members of this settlement are more or less distant blood relatives. According to the [161]
best estimates, the total Carib population of the Barama country does not exceed six hundred souls. The local traditions of the 173
Indians state that their ancestors migrated into the Barama coun- 167
try from a former home around the head of the Corentyne River. Less than a hundred years ago, Schomburgk found a few Akawai villages on the Barama, apparently representatives of the tribe which formerly occupied the whole region and which at that time was in the process of being eliminated.[1] Even today the Barama 174
Caribs express a feeling of antagonism toward the Akawais as a [186]
group, perhaps a survival of the rivalry between the two groups consequent upon the Carib usurpation of the area. On the basis of this evidence it would seem improbable that the ancestors of the present Caribs were in the Barama area much before two hundred years ago. And it would be conceivable that in some distant way most of the present living individuals are related by blood. However, the isolation of the settlements and the difficulties of travel in the region have in many cases erased the memory of such connections from the minds of the people, if in fact such connections actually existed. The important fact from the sociological point of view is that in many instances, as here at Sawari, individuals are not consciously aware of actual blood relationship with certain other individuals.

Reference to the preceding section will acquaint the reader with 601
the kinship terminology. In checking this material I found that men applied the term pamuko (male cross cousin) not only to men who were known to be their cross cousins, but also to all men of the speaker's generation who were not known to be parallel cousins, men, that is, who were not considered actual blood rela-

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[1] Schomburgk, 1922-23, *Travels in British Guiana*, Vol. I, Chap. XI.

601 tives. Analogous usage prevails in the case of takano (female cross cousin). The usage is comparable to our familiar application of the terms "brother" and "sister" to persons with whom we can trace no relationship. At the same time, an individual is always aware of those individuals with whom he can trace actual blood relationship. It is this loose usage of the terms for cross cousin which prevent one from projecting relationships on the basis of terminology alone. It also lessens the precision with which 582 marriages may be studied, because although in many of the cases which I investigated the mates turned out to be traceable cross cousins of closer or more remote degree, in other instances this was not the case. In other words, the terminology implies a positive rule that a cross cousin be chosen as the mate, as well as the negative rule that marriage must not be contracted with a parallel cousin. But in actual practice the negative rule is rigidly adhered to, whereas the positive rule is broadened so that eligible mates include all individuals of the opposite sex who are called cross cousins, whether or not the actual blood connection is known. Thus, at Sawari, Miller's present father-in-law, David, if the terminological implications of the system were carried out, should be either the brother of Miller's mother, or one of her male parallel cousins, or the husband of Miller's father's sister, or the husband of one of Miller's father's female parallel cousins. Both David and Miller were emphatic in stating that no such blood connection existed between them.

601 621 582 For practical purposes, then, we have five groups of blood relatives at Sawari, whom we may designate respectively as Miller's group (twenty-nine individuals), John Cook's group (seven individuals), David's group (seven individuals), Mary's group (eight individuals), and Christina's group (two individuals).

If we turn now to the affinal relationships we see that certain of the above-mentioned blood groups are interconnected by marriage. The several groups vary, however, in the direction of such contacts. Thus, John Cook's group is connected by marriage only with Miller's group, through the marriages of John Cook, Mary, Daniel, and Susan, all of whom married blood relatives of Miller. The John Cook group has no other connections. Christina's group is connected by marriage only to David's group, through the marriage of these two individuals. The Christina group has no other connection. David's group is connected with Miller's group 601 through the marriage of Miller and Elizabeth, with the Christina 621 group through the marriage of Christina and David, and with 582 Mary's group through the marriage of Cecelia and Joseph; but David's group has no connections with the John Cook group. Miller's group has direct connections by marriage with the Mary group through the marriage of Miller to Mary's deceased sister, with the David group by marriage of Miller and Elizabeth, and with the John Cook group by the marriages of Columbus, Elsie, Henry, and Laura; Miller's group, however, has no direct connection with Christina's group. Mary's group is connected with the Miller group by marriage of Miller and Mary's deceased sister, and with the David group by marriage of Joseph and Cecelia, but has no direct connection with the Christina group or John Cook's group.

To summarize, we find each of the five blood groups connected by marriage with one or more of the other blood groups. Miller's group is connected by marriage with three other groups; David's group is connected with three other groups; Mary's group is connected with two other groups; and Christina's and John Cook's each have only one such connection.

Let us now examine the number of individual marriage contacts each group has made with the other groups. Members of Miller's group are involved in ten marriages (including Miller's marriage to Mary's deceased sister). Six of these marriages involve members of three of the other four blood groups in the settlement; two marriages were made with outsiders whose blood groups are not otherwise represented in the settlement (Edwin and Lulu, John and Rose); two marriages were made within the Miller group (Samuel and Elizabeth, Henry and Caroline). Of the six marriages involving groups in the settlement other than Miller's, four were made with members of the John Cook group (Columbus and Susan, Elsie and Daniel, Henry Daniel and Mary, Laura and John Cook), one with David's group (Miller and Elizabeth), and one with Mary's group (Miller and Mary's sister). John Cook's group has made four outside marriages, all of them involving members of Miller's group. David's group has made three outside marriages, Mary's group has made two, and Christina's group one. These facts are tabulated in Table A.

621 These blood groups in actual life have even less formalism than that with which they have been described here. They cannot be considered sibs, inasmuch as they include relatives on both the male and female sides.

It thus appears that both relationships by birth (that is, relationship by blood) and by marriage are important factors in determining the constitution and stability of the settlement.

621 768 Conversely, the termination of either of these types of relationship by death or, in the case of marriage only, by divorce, may tend seriously to disrupt the settlement. In the first place, death in a house always means its abandonment, along with the clearing in which it is situated. On the map will be noticed several "old settlements" containing tumble-down houses smothered in vegetation. These are overgrown clearings abandoned on account of death. One represents the residence which Miller abandoned upon the death of his first wife. The other is the residential clearing of one Willie, a former resident of Sawari, who, on the death of his wife, married a woman in Kurewa and settled in the latter village. It will be remembered that John Cook joined Sawari settlement on the death of his first wife.

586 The divorce of Caroline from her former husband, MacDonald, removed both of them from their former village of Kwamata. The divorce of Joseph (David's son) from his Kwamata wife removed him from that settlement and added him to the population of Sawari.

TABLE A

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BLOOD RELATIONSHIP AND MARRIAGE IN SAWARI SETTLEMENT

	Blood Group					
	Miller	Cook	David	Mary	Christina	Total
1. Number	29	7	7	8	2	52*
2. Marriages	10	4	3	2	1	12**
3. Marriages into other blood groups in Sawari	6	4	3	2	1	
4. Marriages into groups outside Sawari	2	0	0	0	0	
5. Intra-group marriages	2	0	0	0	0	

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* Eight children can each trace relationship to two blood groups because they are offsprings of intergroup marriages.

** There are actually twelve marriages in force in Sawari at present (counting Miller's marriage to Mary's deceased sister). In tabulating for each group the marriages involving its members, as in Row 2, the figures in some cases are duplicated because some of the marriages involved more than one group.

621 **Families and Households.** We have already seen the distribution of the inhabitants among the several houses of the settlement, the location of the houses themselves in relation to each other, and the blood groupings within the settlement. I shall now describe briefly the organization of the settlement by families.

At the time this study was made there were eleven married groups living in the settlement. Although no elaborate marriage ceremony is practised, there is no doubt in the minds of the natives as to which persons are mated. The general pattern for marriage is described in the section on the Sociology of the Caribs, so I shall not repeat it here.

595 Miller, the headman, is at present married to Elizabeth, the daughter of David. Also living in his house are Charlotte, Elizabeth's sister, and Mary, the sister of Miller's deceased first wife. Elizabeth is young and buxom, handsome by Carib standards, and perhaps twenty-two years old. She has as yet given birth to no children by Miller, and this is the first formal marriage relationship into which she has entered. She is the only one of the three women whom Miller calls "puitu," wife. It is upon Elizabeth that Miller showers his most ostentatious affection; he boasts about her; when he goes on trips, for instance to Towakaima portering a load for me, he takes Elizabeth as his travelling companion in preference to his other two women. To her go the best of his earnings and trinkets; for example, of the presents which I made him from my stock of trade goods, the best cloth and the best beads were given by him to Elizabeth. And Miller desires children by the comely Elizabeth. During one month, for instance, he took occasion to draw my attention repeatedly to the protuberance of the Elizabethan abdomen, a condition which appeared to my unconcerned eye to be merely another example of the general "potbelliedness" almost universally observable in both sexes, but which Miller delighted in considering as evidence of pregnancy. Great was his eventual disappointment in discovering that his wife was again menstruating at the regular period. Miller and Elizabeth have been living together for about a year.

Old Mary and Charlotte also live in Miller's house. Mary is 587
a middle aged woman, apparently beyond the child bearing age. 595
She is the widow of a man formerly living at Haiari settlement.

595 Her husband died and she came to live with her sister, Miller's 587 wife, who was then alive. It seems that her former husband was a classificatory brother of Miller, so that her appearance in the Miller household may be ascribed either to the levirate or to blood ties which led her to make her home with her closest female relative. According to other members of the settlement, she lived sexually with Miller while his first wife was still alive, but that phase has now passed. At the present time she is a rather pathetic old woman who wears an unconsciously humorous expression of utter futility and hopelessness on her features, an expression which apparently has some foundation in her circumstances of life. For now she is a sort of maiden aunt in Miller's household. Having no living children of her own, she is entrusted with the care of Miller's small children, is relied upon for much of the heavy labor in the field and about the house, and assumes much of the responsibility for the management of the household. And of the luxuries of life she gets the smallest share. Miller speaks of her as of an obligation, but one has the distinct impression that he realizes the practical value of old Mary, who relieves the more attractive Elizabeth of some of the disfiguring labor which would otherwise fall on her shoulders.

595 Charlotte has only recently been taken into Miller's household. 582 She is a young girl, not more than fifteen or sixteen, who has only recently accomplished the physical change into womanhood. In fact she is the only young marriageable woman in the settlement. Columbus, a young man of perhaps twenty-two, is forced to take as wife the little girl Susan, who has not yet reached puberty, although Charlotte would be just the mate for him were it not for Miller's selfishness. Now the exact status of Charlotte in Miller's household was in the process of change at the time of my residence in the settlement. Miller steadfastly refused to admit that she was a "puitu" (wife), but merely said in an evasive manner that he "was keeping her" because her sister Elizabeth could look after her in Miller's house better than David (Charlotte's father) could in his house, since the latter had married another woman following the death of 622 Charlotte's mother. But the fact remains that Miller, acting on 595 the multiple authority resulting from his position as headman of the settlement, head of his own household, and the strongest

personality of the group, has refused to turn her over to Columbus. 595
David says that he has "given her" to Miller. And it is certain 622
that she is subject to the sexual attentions of Miller. My negro
cook, Henry, who slept in a house near Miller, where he could 595
observe the nighttime occurrences in the headman's domicile, took a morbid pleasure in reporting to me confidentially each morning Miller's preference of the night before. On the occasions when he had observed Miller enter the hammock of Charlotte, Elizabeth could usually be observed the following morning weeping or acting otherwise in a depressed way. During my stay at Sawari, Miller's attentions to Charlotte increased in frequency. On two occasions the observing cook reported that Miller had left Elizabeth's hammock almost immediately after entering it and had gone to Charlotte's hammock. On the days following these events, Elizabeth was exceedingly dejected. Also, the last present given by me to Miller, was turned over by him to Charlotte in preference to Elizabeth. During the course of this romance within Miller's household, if it may be so called, I noticed a definite increase in assurance and poise on the part of Charlotte. From these sidelights of Carib family life, we may gain some insight into the workings of personal interaction, emotionalism, and formal status in a polygamous household. Whether or not Charlotte is the wife of Miller in name, she is certainly at least a concubine in fact. As regards her household activities, on the other hand, Charlotte takes a slightly inferior position. That is to say, she is under the direction of Mary and Elizabeth in the activities concerned with field-work and house-work.

Concerning the personalities of the three women in Miller's 595
household, then, we see that Elizabeth is nominal head of the 554
female side of household affairs. She, however, is greatly influenced in practical matters by the advice of Mary, whose greater age and experience she respects, while at the same time she has no reason to feel antagonism toward Mary as a sexual rival. Mary is nominally in the secondary position of rank and authority, but because of the circumstances enumerated above, is able to exert the strongest personal influence of all the three women in matters which are not involved with Miller's sexual feelings. Charlotte nominally is the subordinate one of the three women; but, due to her apparently increasing hold on the affections of Miller

554 595 gradually gaining more and more actual importance in the household. She is now well on the way to being a serious rival of Elizabeth as nominal mistress of the household. All of this is not to say, however, that the rivalry between the women of this polygamous household has as yet, at least, reached the point of open hostilities.

159 Miller himself is a forceful personality, known far and wide by reputation in the Barama country. To some extent this reputation is the result of the following series of exploits, partly told me by Miller himself, partly by other Indians, and by Mr. Pestano. About 1920 Miller, his brother Alec (who now lives at Haiari), and their father visited a cassiri spree at Towakaima settlement. The spree was given by an Indian, one Robert, an older man with an attractive young wife. In the course of events the discerning eye of Miller observed the charms of Robert's wife, and Miller devoted most of his attention to her. About midnight the spree came to an end, as such affairs usually do, with the exhaustion of the liquor supply, and the participants betook themselves to their hammocks. Robert escorted his wife to her hammock, which was near his, but when she thought that her husband was asleep, she got up and repaired to a prearranged rendezvous with Miller in the bush near the settlement. Robert woke up, noticed her absence, searched her out, and proceeded to give her a terrific beating. Miller objected to Robert's beating the woman, to which Robert retorted that he was well within his rights (as he was) and that he intended to do the same with Miller when he finished with his wife. Thereupon Miller attacked the old man who, with the strength of an outraged husband knocked Miller down. (This part is omitted in Miller's version of the tale.) Attracted by the commotion, Miller's father and Alec, his brother (who is the tallest man I measured in the territory), joined in the fight against Robert. As Robert was being overpowered, he seized his cutlass and lashed out, giving them several wounds, the scars of which are still visible on Miller's and Alec's faces and bodies. Miller and his kinsmen replied with their cutlasses and soon had beaten Robert to the ground. Robert's older son was a coward and fled into the bush, leaving his father to the mercy of the attackers. Blood was over everything. But Robert had a little boy about six years old who did not run away. Robert also had a muzzle

loading shot gun lying on the loft poles of his house, ready for 159 powis shooting the next morning. The small boy secured this weapon during the course of the fight, without anyone observing him, and aimed at Miller's head. Being so small, he was unable to hold the gun steady, but, as it was, the charge of buckshot caught Miller in the left arm at a range of a few feet, putting him out of commission for the time being. Thereupon the boy ran away into the bush. Alec and Miller's father followed in a towering rage, but were unable to find the boy, so they returned to the scene of the battle and finished off old Robert by cutting him to pieces with their cutlasses, after which they buried him in a hole in the ground and disappeared into the bush. Robert's kinsmen went down river in canoes and reported the fight at the Baramanni police station (now abandoned), which stood at the confluence of the Baramanni and the Waini. In about six weeks Miller, Alec, and their father, who had been hiding in the bush, were captured by the police and taken to Georgetown. Miller was given a three-year jail term, twenty-six months of which he spent in the hospital, undergoing a complicated series of operations which have left his arm a stiffened mass of scars. His left arm is thus permanently bent at the elbow, and the fingers of the hand are immovable, but, in spite of his handicap, Miller remains one of the best huntsmen in the village and is respected by all for his cunning, courage, and strength.[1] Not only has Miller established a strong position for himself personally and politically, but he is now learning the piai technique from old David, and upon the latter's demise will doubtless succeed David as the village religious official.

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[1] The account of Miller's adventures in white civilization is not unilluminating as a note 177 on acculturation as it affected one Carib at least. The story of his experiences in Georgetown was one of the few subjects which Miller could treat connectedly in pidgin English. He repeated it to me in almost precisely the same form every time he got drunk, which is to say a good many times in the course of the four months I knew him. I give it here with some emendations in his own words as I took them down on one occasion: "Dey put me inside hos-pee-tal an me go sleep like after me all-same drink plenty cassiri. Dey put me inside night-shirt. Me no like! But gal in hos-pee-tal — dem gal in white dress — dey nice, dey hold me hand, rub me head, put glass ting in me mout. But dey no get inside bed with me. . . Hos-pee-tal all same done. Me stay inside jail long time. Me no like. Inside jail dey give me good bread, good meat. But de night — no fire, cold! Me tink me for dead wit cold. . . Den governor tell me for go home. He buy me [with the careful pronunciation of one who has memorized an unfamiliar list] hat, collar, necktie, shirt, pants, shoes. An he give me one piece paper [ticket] for walk on big korial [steamer] Morawhanna side. An he give me *good* ration — six cake cassava, two pound salt fish, one pound sugar, an two dollar cash. Two dollar, panari! . . ." "What you do with two dollar?" "Me have *good* time, panari, good time. First ting me buy one moto car wit one dollar. Me walk all about Georgetown inside dat car. Den me buy one black gal, nice black gal, panari, pretty black gal, man! Me buy for one night." "One dollar?" I ask skeptically. "Yeh. One dollar. But she keep me pants, me shirt, too. Me no care, me no get dem ting inside bush. On big korial me play with black men. Dey got dem little ting, how you call? dem ting wit black spot on dem. One man take me shoes, me hat. Me no care. Me come home." Miller at least has the necktie as a souvenir of the generosity of the government and at this point he opens his pegall and exhibits the neckpiece proudly.

59 To complete the picture of the immediate Miller family, we must mention the five children, four of which are Miller's offspring by his deceased wife. Adoph is Miller's oldest, perhaps ten or eleven years. Charlie, about the same age, is the son of Miller's deceased wife's brother. Julia, about seven years old; Pipi, about four; and a baby girl, about three years old, are all Miller's daughters by his former wife.

583 Miller's house stands roughly in the center of his clearing. Grouped around his house in more or less satellitical fashion are the structures housing three other families. Caroline, a younger sister of Miller, is a jolly matron of perhaps thirty-five years. She is the female jester of the settlement, a position which she filled too well for the liking of her former husband, one MacDonald, who now lives at Powis Hill with another woman. Her two young boys live with MacDonald at Powis Hill, her two girls stayed with their mother. It seems that Caroline and MacDonald were living at Kwamata until they broke up their marriage about a year ago, after which Caroline and her [illegible] girls repaired to Sawari to be under the protection of Miller. Shortly before my arrival at Sawari, a young man named Henry, Caroline's junior by perhaps twelve years, visiting his brothers Samuel, Columbus, and Henry Daniel of Sawari, attended a cassiri spree at Miller's house. At this time Henry, for reasons best known to himself, decided to become the husband of Caroline, although he already was the husband of a woman in Kurewa settlement. In this decision, as in many others, the hand of Miller was apparent. Aside from a fraternal interest in the happiness of Caroline, Miller also has reason to surround himself with sturdy young men who can cut fields and build korials for him, activities in which he is handicapped by the condition of his arm. According to the gossip of the village, therefore, Henry was won over by promises of cutlasses, knives, axes, and other trade goods. This bait, together with the proximity of his brothers and a quarrel with his Kurewa wife, apparently influenced Henry to remain, and accordingly he set to work to build a house for himself and Caroline. As it became apparent that Miller did not possess the trade goods which had been so slyly mentioned, it was evident that Henry was taking a more and more half-hearted interest in the arrangement. When one-half of the house roof was finished he joined a group of men

going to Towakaima to carry supplies for me back to Sawari. 583 On the way to Towakaima he passed through Kurewa, made things up with his woman there, and during the rest of my stay in Sawari did not reappear. Caroline and her girls continued to live in the half-roofed house, doing their share of the field work, but depending for meat upon the efforts of Miller and Samuel.

Caroline and Elizabeth (the wife of Samuel) are not only sisters, 572 but also great chums. Elizabeth is probably five years younger 593 than Caroline, but both are buxom, lovers of a joke, and slightly lazy. They spend much of their time together, and their shrieking laughter can be heard almost any time of the day, if they are in the settlement, and late into the night. They are perfect foils for each other, Caroline loud and boisterous, Elizabeth quieter and cleverer. Few people I know consistently have as much fun together as Caroline and Elizabeth. Samuel, Elizabeth's husband, is her junior by perhaps ten years. He is shorter and considerably less bulky than she. Also he is quieter. But from all the signs, they are perfectly devoted to each other. Elizabeth has been living with Samuel more than a year. With them live her two little girls, Katrina and Mary , aged about five and seven respectively, children of her first (deceased) husband.

Samuel's brother Columbus has his own house on the other side 592 of Miller's establishment. He lives with Susan, a young girl not yet come to puberty. Susan receives help from the women of Miller's household in cooking and field work, in return for which Columbus assists Miller in field cutting, korial building, and shares his game with Miller's household.

Separated by a hedge of cotton bushes from the afore-men- 554 tioned households, stand the houses of David, his son Joseph; his 791 son-in-law Joseph, and his wife's sister Margaret, on the north side of the clearing. David is an old man possibly of sixty years who enjoys the double distinction of being the father-in-law of Miller and the piaiyen (or priest) of the village. He is also distinguished in the possession of a withered right arm, perhaps the result of early paralysis. (He says that he cannot remember a time when this arm was as large as the left one.) He has never been renowned for his physical strength or hunting ability, but is the village repository for such myths and legends as are extant in the group. For his learning and religious powers he is much respected.

554 791 He formerly lived in Kwamata, but moved to Sawari some years ago, when the strength of Miller's influence became apparent there. At the present time he does no hunting, depending upon his sons and sons-in-law for meat supply. His present wife, Christina, was a widow when he married her. She has grown children elsewhere by previous marriages, but no children by David.

592 In a separate house near David's lives Margaret, Christina's sister, perhaps three to five years younger than the latter. She has lived with men, but at the time of my arrival in Sawari was unattached. The reason assigned for this by informants was her physical unattractiveness. However that may be, about a month after my arrival, David's son (by a previous marriage) Joseph appeared at Sawari, having been driven out of Kwamata by the irate brother of his wife with whom he had quarrelled there. It was not long until he had built a house near David's, and just before I finally left Sawari, arrangements had been made for Margaret to move into his new house with him. Also living in David's house is his young son Frederick, a boy of about twelve years of age.

Near David's house is the dwelling occupied by his daughter, Cecelia, and her husband, Joseph, and their little girl, Edna, about two years old. Cecelia is perhaps twenty years of age and the most attractive woman of the settlement from the white man's point of view. That her charms are not altogether unappreciated [554] by the Caribs is evident. Joseph, who is her senior by perhaps three or four years, is recognized as the most accomplished fiddle player of the community, and in this capacity officiates at all drinking sprees.

554 621 In Miller's clearing, taken as a whole, we may thus distinguish two local groupings. The southern half of the clearing is occupied by the respective families of Miller, his kinsman Columbus, and two sisters, Elizabeth and Caroline. In the northern half of the clearing, separated from the southern half by a low barrier of bushes, are the household of David and those of his son, his daughter, and his wife's sister. Thus, while Miller and his household seem to hold the dominant social position in the clearing, David is a very close second in prestige. The social life of the clearing is most strongly influenced by these two men, each in his own way. And their respective influences in the life of the clearing are to a

certain extent reflected in the grouping of the households. Miller, 554
as the dominant individual, occupies the largest house, which is 621
placed nearest the center of the clearing. Grouped around him are the households of the clearing most closely linked to his by blood and marriage, the households in which presumably his influence is greatest. In a distinctly separate part of the clearing are grouped the households which in analogous ways are most influenced by David.

Reference to the preceding section on blood and marriage relationships will show that the households established in Miller's clearing are those among the households of the settlement having the closest connections with Miller by blood and marriage. Here are to be found the only representatives in the whole settlement of the respective blood groups of Miller's present and former wives. Here also are the only two households in the settlement formed by marriages in which both participants are members of Miller's blood group (Henry-Caroline, Samuel-Elizabeth). The location of the households above described and the composition of the population of this clearing, therefore, do not appear to be entirely accidental, but seem to hint at underlying factors in social organization.

Miller's clearing is a purely residential area. The fields belonging to the residents of this portion of the settlement are located at a distance of about half a mile to the northwest, as shown in Figure 9. The division of the field plots is explained later.

In John Cook's clearing, located about fifteen minutes walk distant, we have a collection of four married couples. The situation is somewhat less complicated here, inasmuch as Cook is unquestionably the dominant personality in his clearing. He is a gaunt man of probably forty years. He belongs to the same generation as Miller, and is probably about the same age. He formerly lived at the now abandoned settlement of Massewah, became a good friend of Miller, and joined Miller's settlement some years ago upon the death of his first wife. The motivation for his joining the Sawari settlement apparently grew out of his personal friendship with Miller, and as a result of this he married his present wife, a kinswoman of Miller. Cook's children by his former wife are dead, but by his present wife, Laura, a woman of about thirty years, he has a boy and a girl of about four and six respectively

554 Shortly after my arrival in Sawari, friction between Cook and
621 Miller, which had apparently been brewing under the surface for
578 some time, became evident. Miller, on several occasions during the course of cassiri sprees, picked quarrels with Cook and tried to induce the latter to fight him. Cook took the attitude that he could not be bothered with such petty disputes and went about his business unperturbed. As a result, during most of my stay in Sawari, Cook, and as a rule the residents of his clearing, stayed away from Miller's clearing. The residents of Miller's clearing finally refused to invite them to cassiri sprees, to which the residents of Cook's clearing responded by having cassiri sprees of their own to which the Miller residents were not invited. In this dispute Laura remained with her husband.

The only exception to this rule was Henry Daniel, a young man of perhaps twenty-one. He is the only man in Cook's clearing who has close relatives of his own sex in Miller's clearing. His brothers, Samuel and Columbus, live there, a fact which assured him of enough backing in the antagonistic atmosphere of Miller's clearing to make visits there bearable. His wife, Mary, a half-sister of Cook, is very young, perhaps eighteen, and during my stay in Sawari gave birth to her first child.

621 Daniel, a half brother of Cook, is a young fellow of about twenty-
554 two. He is Cook's closest cooperator in the settlement. They do everything together. Daniel's wife, Elsie, a cross cousin of Miller, is not more than seventeen or eighteen years of age. They have no children.

John, the head of the fourth household in Cook's clearing, is a distant parallel cousin of Miller. He is a man of about thirty-five, and his association with Cook is based on personal friendship.

Thus we see that three of the four households in Cook's clearing are related to him by blood, and one household is associated with him on the basis of personal factors. Of the seven individuals in Sawari belonging to Cook's blood group, six live with him in his clearing.

Cook's clearing is different from that of Miller in that it is not only a residential clearing but also an agricultural field. It is the largest open space in the Sawari neighborhood, measuring nine hundred and fifty feet by six hundred and eighty feet, and the whole clearing is not more than a year old. For some years Cook

has lived here, while a short distance to the southeast of the present 621
clearing lies his abandoned field. Only about a year previously 554
did the other households which now occupy the clearing join with Cook, cooperate in the clearing of the present immense field, and take up their residences there. In this field each man has his own plot of ground, which his household cares for. But at the present time Cook's clearing has hardly yet become stabilized. The grouping of the houses here reflects no social division within the group itself, which is consistent with the fact that Cook's influence is supreme. Here the divisive factors of blood and personal prestige, which tended to set David's group apart from Miller's group in the latter's clearing, have practically no force. Cook's house, in the southeast corner of the clearing, happens to be the one which he has occupied for some years. The dwellings of the other households are scattered across the center of the field in easy access to their respective agricultural plots.

Our examination of household groupings thus far has given 571
hints of divisive factors arising on the basis of blood, personality, and personal ability. The settlement itself is split into two large local groups, centering respectively about Miller and Cook. Miller's local group is further divided into two sections which center respectively about Miller and David. In each of these groupings there is a high correlation between the personal influence of the dominant character, his blood relationship with the members of the group centering about him, and the spatial grouping of the households concerned.

There remains the household of Edwin, located, as can be seen 592
in Figure 9, about midway between the settlements of Miller 571
and Cook. Oddly enough, Edwin's social position with reference to the two major local groups correlates remarkably with his spatial relation to them. Edwin is approximately the same age as Miller and Cook. He is a large man, easy going, capable, but given to excessive intoxication when the occasion presents itself. His wife, Lulu, is only slightly younger than he and has borne all his five children. Her blood relatives live at Towakaima and Sineparu. The oldest boy, Peter, is probably about sixteen years of age and is looking about for a wife. The oldest of the other four children is about eleven. Although Edwin is a distant parallel cousin of Miller, he divides his contacts equally between the latter

592 and Cook. During the antagonism between the Miller and Cook
571 settlements, Edwin visited both unconcernedly. At one time he assisted John Cook for several days in the making of a cassiri kanu, at another time he assisted Miller in the construction of a woodskin boat. In the meantime, he went about his own hunting and continued with the clearing of a field for his own exclusive use without apparently becoming embroiled in the disputes which engaged the attention of the Miller and Cook groups. Edwin's household, therefore, seems to be a unit to itself, friendly with all, but taking no sides in group rivalries. The blood ties of this household with that of Miller are apparently, as in the case of John, too remote to have much influence. Here again the personal factor seems to be present. Edwin is a man of the same age group as Miller and Cook; he feels capable of handling his affairs on the basis of age and experience, without the direction of either Miller or Cook. But, being easy-going by nature, he lacks qualities of leadership and responsibility which would draw about him a group of satellites, as has happened in the cases of Miller and Cook.

From our survey of household groupings the following factors affecting the organization of the settlement have emerged: personality, personal ability (including physical strength, mental alertness), blood relationship, and marriage relationship.

421 **Economic Factors in the Social Life.** The general rule regarding the ownership of property is strictly individualistic. A man owns his field, house, hunting and fishing equipment, canoes, ornaments, tools, raiment, and the game that he has bagged. A woman owns the implements which she uses in the field and house, the pottery, the basketry (which is made, however, by the men), her clothing, ornaments, and accessories. All personal property is held by individuals. Even children are the owners of ornaments, toys, and trinkets, and this ownership is respected by the elders, as I have discovered in acquiring specimens. In spite of individualism in ownership there is in fact a certain communism in practise. That is, members of the same household and settlement may borrow goods from each other with the owner's permission. Borrowing without permission is considered theft. (See Section on Crime and Punishment.) This communism of use means that the members of a larger household have a greater variety of goods at their command than the members of a small household, even though the

421 individual members of the respective households may be on essentially the same economic footing.

422 A survey of all the houses in Sawari was made in one day, and a catalogue compiled of articles found therein, in order to discover what inequalities of economic status existed in the community. The catalogue of articles found in certain of the houses is appended to give an idea of the typical possessions of the Sawari households.

Samuel's house

3 water gourds (calabashes)
8 clay pots
2 walishas
6 baskets
Powis feathers
6 hammocks (cotton); 1 hammock (maho)
8 cakes cassava bread
kakarelli leaves
about ¼ pound cotton
1 bunch bananas
1 wood bench
1 old cutlass
1 axe
1 bow
2 arrows
1 spindle
1 fan
1 cassava grater
1 cassava pan
1 hen, 4 chickens
7 necklaces and ornaments
1 cassava squeezer

Henry's (and Caroline's) house

1 akuri skin
4 clay pots
1 water gourd
2 cutlasses
1 stick of beeswax
4 fish hooks
1 walisha
2 cotton hammocks
1 cassava squeezer
1 cassava grater
Powis feathers
1 bow
4 arrows
1 trade knife
some cotton
1 spindle
1 wooden bench
4 necklaces and ornaments
1 cotton dress

Miller's house

1 cassiri kanu
6 large clay pots; 5 smaller clay pots
1 cane press
4 walishas
2 water gourds; 4 other calabashes
2 cassava squeezers
1 cassava pan
2 cassava sifters
1 drum
3 baskets
1 cassava grater
1 fan
8 cotton hammocks
2 maho hammocks
1 parrot
3 Spanish cadouris
6 fowls
1 small cannister containing mirror, box matches, 2 combs, about 3 yards red cotton cloth, one watch (broken), 2 green beer bottles, 2 empty tobacco tins (one ounce), 1 decorated maraka (medicine man's rattle), 4 steel needles, partly used spool black thread, 1 mouth organ

422 1 cotton tray
1 handbag made of nibi
some kakarelli leaves
3 spindles
1 bow
3 arrows
1 dog with three young pups
1 warakabra bird
3 fish rods
3 fish hooks
1 wooden bench
1 cassiri stirring stick
2 korial paddles
1 axe
1 cornbird

Joseph's house (David's son-in-law)
2 cotton hammocks
5 clay pots
2 cassava sifters
2 cassava squeezers
3 calabashes
1 cassava grater
1 cassava pan
1 cotton tray
1 cutlass
2 bows
4 arrows
1 cassiri kanu
1 violin (obtained from shop)
1 cane mill
2 baskets
1 shoulder bag (of "tiger" skin)
1 walisha
2 maroudi birds
1 dog
1 wooden bench

David's house
3 cotton hammocks
3 maho hammocks
5 clay pots
6 calabashes
3 cassava squeezers
3 dogs
4 walishas
4 baskets
1 cassava grater
some kakarelli leaves
1 warakabra bird
1 bow
2 arrows
1 cassava sifter
some raw cotton
1 cutlass
1 maraka
1 wooden bench

John Cook's house
1 cassava grater
1 cassava trough
2 clay pots
1 drum
1 cassava pan
3 calabashes
3 cotton hammocks
1 bow
2 arrows
2 shoulder bags ("baboon" skin)
some kakarelli leaves
1 violin (home-made of bamboo joint)
3 dogs
some beeswax
1 large fish hook
1 walisha
1 basket
1 cassava squeezer
1 cassava sifter
1 pair trousers
1 singlet
1 cotton dress
1 cutlass
1 axe

422 556 However, I soon came to the conclusion that such a survey shows little if anything of importance to an understanding of the social situation in Sawari. Miller's house contains the largest

number and the largest variety of items. Also, Miller or the members 422
of his household own some of the most valuable imported 556
items obtained in trade. This condition does to a certain extent
reflect Miller's social prominence in the settlement; it may be regarded
as a result of his social position, but not as a cause. Those 554
outsiders who have dealings with the settlement (such as traders 622
at Towakaima, the prospector Bell, myself) deal with Miller as 464
the recognized head of the settlement, as the man with greatest 439
influence; and he is therefore enabled to acquire more trade goods than other men. For instance, I required a crew of four men to go down river to Aranka, where I had left my supplies, and return to Sawari carrying a portion of the supplies on their backs. The round-trip journey was a matter of perhaps one hundred miles or about ten days. It was an arduous job, but one for which each of the men would be well paid. Negotiations were started with several men individually, but their enthusiasm was only mildly aroused, even by the prospect of acquiring fine trade goods for themselves and their families. Finally the matter was broached to Miller, who promptly persuaded four young men to undertake the journey as a favor to themselves, to him, and to me. A deal was made between Miller and the men whereby Miller obtained a certain part of the trade goods which each man received as pay, in return for his services in arranging the employment for them. Thus Miller, without making the trip himself, received more goods than any one of the men. But there is no formalization in an arrangement of this kind, which was made, in this case, simply as a personal agreement between Miller and the other men. His social prestige lent a persuasiveness to his words, but, although the consummation of a successful deal of this kind doubtless added something in turn to Miller's personal prestige, there is nothing in his office of headman which enables him to coerce the other members of the settlement. This was illustrated later, when the negro prospector, Bell, requested several laborers of Miller. Although Miller again tried to persuade members of the settlement to take the work, he was in this instance unsuccessful because the men involved considered Bell's trade goods too poor to make the job
worth their while. 556

A mere survey of material possessions among the Caribs indicates 422
a small degree of social importance because in this culture 511

556 422 511 the accumulation of wealth has little correlation with social status. There are certain material essentials, which have been described in our chapters on material culture, and these every household must possess if it is to survive. The list of these essentials is not large, as compared with the possessions of more complex cultures; but it must be remembered that the major part of the Carib possessions are really essentials, there are few luxuries in the catalogue of Carib material culture. Thus, the accumulation of essential goods is merely a matter of convenience, the goods have little social connotation in themselves. A man may have two bows, so that he will not be inconvenienced should one break, but he would consider it a foolish waste of time to make a dozen bows. He would have no use for them, and he would add nothing to his prestige (in fact, would damage his reputation for intelligence) in the eyes of his fellows by possessing such a surplus.

556 461 One of the reasons for the surprizingly considerate treatment which Indians receive from outsiders in this region is the fact that the latter have been forced to recognize that beyond a certain point, the mere possession of property means nothing to the Caribs. Every gold digger, lumber operator, and balata bleeder who has traveled on the Barama will tell you of the difficulty he has in keeping his Indian boatmen and laborers at work. "An Indian will work only until he gets what he wants and then he will quit cold," is a common observation. Consequently, anyone who relies on a native crew must depend upon the personal relations which he establishes with his workmen to a larger extent than the trade goods which he can give them.

251 Accumulations of food are likewise of little significance to the Caribs, for two reasons: the climate does not permit prolonged preservation of native food products, and daily supplies of food are readily available to the competent hunter and agriculturist, though not without a certain amount of effort, it is true. Cassava bread is the only food product which can be kept over a period of months, and such preservation is resorted to only in cases of necessity, inasmuch as the flavor of the product is adversely affected by storage.

301 511 A small number of luxuries are held in esteem by the Caribs. Among those which they produce themselves are necklaces of teeth and seeds, cotton fillets, bracelets, and other ornaments.

There is, however, a limit of personal ornamentation beyond 301
which an individual's movements in dancing and drinking ac- 511
tivities are hindered at the expense of sociability. I have never seen a Carib "loaded down" with ornaments, although it would be comparatively simple to accumulate enough teeth, seeds, beads, in a lifetime to cover the body completely from head to foot. Cotton dresses are greatly prized by the women, but two or three such garments are considered quite sufficient. I have known many women who have urged their husbands to work enough to buy cloth for one or two dresses, but who have lost interest after sufficient cloth had been acquired. Men also desire singlets, trousers, and felt hats, but a Carib who has one of each of these in good condition cannot readily be interested in the acquisition of additional outfits.

Tobacco of European manufacture is perhaps the greatest [276]
luxury in the region, but I have never observed a tendency to hoard it on the part of those lucky enough to obtain some of this product. Thinking to stem the ceaseless requests for tobacco, I tried the experiment of presenting certain individuals with whole cans of Capstan, only to find that they had wasted it or given it away and were soon begging for more.

The only circumstance in which property factors enter directly 426
into the social situation is that in which a man by reason of lazi- 686
ness becomes a continual borrower from his neighbors. (See section on Crime and Punishment.) If such a man does not reform, he will be eliminated from the social life of the settlement and eventually be forced to take up his residence elsewhere.

Economic activity among the Caribs, then, is based on need. 182
Each family is responsible for itself, and although co-operation 556
in labor and lending of goods is common, the principle of individuality in property remains intact. Accumulation of wealth is of little social importance because one does not need accumulated wealth to fortify or improve one's social position. The reasons for the absence of such need are to be found in the interaction of the culture and the environment.

Let us now turn to the economic activities of the inhabitants of 423
Sawari. In the first place, two different arrangements are in force in regard to agricultural plots. These two types of arrangement are illustrated respectively by the partnership and individual fields.

423
472 Edwin has the exclusive agricultural use of the field from which his food products are obtained. This field he cleared himself, and at this time, he is engaged in the clearing of a new field somewhat to the east of his present house. The fields used by the members of Miller's clearing lie some distance through the bush to the northwest of the settlement, to which they are connected by paths. The large field which lies farthest to the north is used by the households of Miller, Columbus, David, and David's son-in-law, Joseph, each having the production of a certain specified portion of the area. The field originally belonged to Miller exclusively, having been cut by him with the assistance of Columbus. Later additions were made by David and his son, before the latter was married. Samuel owns the field nearest to the large semi-communal field. Columbus is in the process of cutting a new field of his own, and Joseph (David's son-in-law) has just planted the fourth field, which will be used by his and David's household. Thus, the partnership use of a large field seems to be a temporary measure, the younger partners having now become well enough settled to set up for themselves. The single large field, occupied jointly and worked by the members of John Cook's clearing, seems to be a similar case. The latter group of households has been only recently established, and they have joined together in the clearing of a large field, which has been apportioned out so that each household owns a definite tract of it. Within a year or two, when the cutting of new fields becomes necessary, John, Henry Daniel, and Daniel plan to cut fields of their own. According to informants, this method of procedure has been followed in other settlements on the river.

476 In regard to the field used by Miller's household, it has already been mentioned that Columbus has assisted in its clearing. Samuel also assisted in a somewhat minor way. In other words, it appears that Miller, who because of his injured left arm is handicapped in field cutting, has the assistance of these two young kinsmen of his. Miller compensates Columbus through the help which his women give Columbus's young wife in housework and field work. But just what reciprocity exists between Miller and Samuel in this respect, I was unable to determine.

Canoe building is a type of labor which is facilitated by co-operation. The co-operation in such enterprises seems to follow no definite lines. Thus, during my stay in the settlement, John Cook and his brother Daniel built a woodskin together; sometime later Edwin and Henry Daniel co-operated in the building of a cassiri kanu (or barrel); David's son-in-law, Joseph, on the other hand, constructed a korial (dugout canoe) single handed. 476

The only house built during my stay was the half-completed structure begun by Henry (husband of Caroline). In this task he did most of the work, assisted somewhat by Samuel, the husband of Caroline's chum and sister, Elizabeth.

Thus we see that economic status and co-operative effort have little connection with social differentiation in Sawari. 182

Economic opportunity, on the other hand, may be said to be a factor in the unifying of a settlement. John Cook and Henry (Caroline's husband) are two examples of men to whom the fields, hunting grounds, and trade goods of Sawari appeared as attractions. Exhaustion of arable land or hunting territory will, conversely, tend to disintegrate a settlement. Although this has not occurred yet at Sawari, it is an important consideration in other cases, for instance, Korotoko, which was completely abandoned on account of the exhaustion of the soil.

Friendships. Friendships are closest between men of the same clearing. Indeed, this factor seems to be an important one originally in the local groupings, as already demonstrated. Within Miller's clearing, Samuel and Joseph (David's son-in-law) spend a good deal of time together. John Cook and his brother Daniel are close. Edwin and John (of Cook's settlement) often hunt together. Other friendships were not outstanding, with the exception of the one which sprang up between my interpreter and Samuel, both perfect strangers when they first met. On the basis of information gained from informants here and in other villages, I was unable to conclude that friendships rigidly follow either the lines of blood or of locality. As among ourselves, they are based on more or less complex personal factors, often imponderable, and as among ourselves, they vary in stability and intensity. Witness the crumbling of the friendship between Miller and Cook. In any case, friendship, so far as I was able to learn, implies no ritual or magical connection between the participants, nor does it take on the full solemnity and earnestness of a David and Johnathan relationship. Friends simply spend time together, some- 572

572 times assist each other in work, sometimes hunt together, and enjoy each other's conversation and company.

572 621 Friendship is, however, a factor in the formation and stability of the settlement. Thus, Cook's original presence in Sawari was due to his friendship with Miller. A weakening of that relation gave rise to Cook's removal of his residence away from the near vicinity of Miller, the gathering of a group of families around him, and to the eventual rift between the two clearings. John's presence in Cook's settlement evidently is due simply to mutual liking on the parts of the two men. Edwin has a close friend named William in the settlement of Kurewa, and this friendship is doubtless to some extent responsible for the intermediate position which Edwin's family enjoys in the social life of Sawari.

I found no evidence that the friendships between women had any dynamic effect on social groupings in this settlement. Women's friends here, as elsewhere on the Barama, are the result of residence or contiguity determined by other factors.

561 **Age and Sex.** Well defined age groups are not present in Carib society. Girls are secluded at their first menstruation and are exhorted on the duties and conduct becoming to an adult woman by their older female relatives at this time, but without ceremony. This is the only special recognition taken of age changes. Nevertheless, as among all societies which do not formalize the age boundaries, informal recognition is taken of children, youths, adults, and old people.

885 583 Although not stated in so many words, an individual is not considered a full-fledged member of society until he is married. For instance, an underlying conception of this sort seems to motivate the proof of adulthood which is required of a man before the first marriage, and which takes the form of tests of fitness. (This seems at least as large a factor in the housebuilding, field-cutting, and hunting requirements demanded from the groom by his father-in-law as the factor of payment for the bride. Such tests are not required of a man at his subsequent marriages.) A woman's ability to care for a house and field, which is proven to the community after marriage, is apparently demanded before she is accepted as a full-fledged member of the female community. Also, both sexes assume certain responsibilities toward each other and toward the community at marriage (self-sustenance for their

household, a certain amount of fidelity to each other, rearing of 885
children) which are not required of them before marriage. 583

Old people, of whom there are relatively few in this society, 888
are treated with respect, but not exaggerated deference. In fact in many respects they are considered less than complete members of society, inasmuch as they are unable to carry out many of the functions required of more vigorous members of the group. The respect for old age varies with the intelligence of the aged individual. For instance, David at Sawari is deferred to on account of his lore and skill in religious techniques; his mind is still functioning actively, and thereby he maintains his social position despite his uselessness as a hunter and laborer. He is the only aged person in Sawari, and he is by no means completely decrepit. Two very infirm old women observed by me, one at Kurasani, the other at Baramita, were unable to move from their hammocks. They were fed and treated well, but ignored in regard to the decisive actions of their respective communities. Several old men, still more or less active physically, whom I observed at various places in the area, occupied positions no better and no worse than their personalities, physical exploits, and intelligence won for them. There is no pattern of implicitly obeying old age, of consulting it with reverence, simply because of age.

The Drinking Spree. We have discussed the underlying factors 527
which serve to hold the individuals of the group together. In an 182
individualistic community, where everyone goes about his own business and is largely self-reliant, what mechanism is at work to remind the members of the group of their common interests? We have seen that in everyday affairs men and women may meet face to face in pairs or threes, incidentally to their daily life, but we have as yet seen no occasion on which all the members of the group come together to renew the ties that bind them into one community. If one searches for a mechanism which periodically reunites the group, a mechanism of socialization, I think it must be found in the drinking spree.[1]

Throughout the year, when the cassava can be spared for mak- 527
ing drink, sprees are held occasionally. During the months of

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[1] Certain religious functions call together the whole community, notably the supplication to the spirits for a good cassava crop (described in the section on Religion). On these occasions, however, the lay members of the settlement are merely spectators or auditors of the ritual carried on by the piaiyen.

527 December and January, when cassava is usually plentiful, a spree is held very frequently. During my first four weeks in Sawari, for instance, six sprees were held in the settlement. These festivities are "given" in each case by individual households for the benefit of guests. Such an arrangement is in line with the typically individualistic orientation of practically all aspects of Carib life. The women of the household which is acting as host prepare the drink and during the spree act as waitresses, serving the liquor to guests in calabash vessels. I have described the details of these jollifications in the chapter on amusements, but the important fact in the present connection is that for the persons present at one of these functions, the communal ties are strengthened at the expense of individual ties.

527 156 The Caribs are normally fairly reticent with each other concerning their personal affairs; the fundamental philosophy of "every man for himself" rules the daily life of the people; but under the benign influence of alcohol, combined with singing and dancing, much of this reserve breaks down. At these periodic jollifications the members of the group pool their feelings and interests. The following points may make this clearer. Joking and talk arise during the early stages of the spree. Much of the conversation deals with personal matters which under other circumstances would not be discussed. Individual relaxation is also seen in the communal use of articles, such as tobacco, food, hammocks, clothing, which during ordinary times are strictly private. The appropriation of other individuals' partners in adulterous connections, which occurs in the evening, although not condoned by cuckolded husbands, is approved in general and shows a merging of private interests into those of the group. A spree is usually held when a visiting party arrives in the settlement, thus exhibiting unity through extension of group hospitality. The fact that Cook and his group were eventually excluded from participation in the sprees of Miller's clearing gives visible form to the drawing of boundaries about those who "belong," and indicates the growth of a rift in settlement life. The fact that the dispute itself between Miller and Cook arose during a spree illustrates the manner in which the spree serves as a clearing house for social forces. Cook's group defends its position by holding sprees of its own

from which the others are excluded, thus building up its own solidarity. 527 156

Summary. In summarizing the situation in Sawari we are justified in concluding, I believe, that the most important factors of unity are blood relationship, relationship by marriage, friendship, and economic opportunity. 182

The factors which tend to disrupt the unity of the settlement are personal dislike, insufficient economic opportunity, death, and divorce.

Leadership of the community is here based on personality, intelligence, initiative, physical ability, and relationship. Thus Miller, the headman of the whole village, was the first man to cut a field in this vicinity, thereby giving a demonstration of his initiative, physical ability, and intelligence. He attracted a group of friends and relatives about him, who on account of all these factors were willing to submit to his authority, such as it is. The same factors are seen to be at work in the off-shoot group represented by Cook's clearing with Cook as its leader. Children and youths are subordinate to adults, but among the latter such inequality as exists is based on personal factors. 554 622

Sawari, therefore, like the other Carib villages on the Barama, is a local grouping of families, united around a leader for the reasons mentioned above. No single factor is alone operative in bringing together such a group, no single factor can be said to be the exclusive cause of its disintegration.

The balance between the forces of unity and of disintegration in a Carib settlement is exceedingly delicate. The membership is continually shifting, and the life of an average settlement is apparently comparatively short. Sawari was founded perhaps ten years ago by Miller, after his sojourn in the toils of the law. It is still growing, but in a fluctuating fashion. Many of the newly married residents have been members for only a year or two. Joseph (David's son) joins the settlement, Henry (Caroline's husband) leaves in the space of a few months. It is quite likely that further additions and subtractions will take place at about this rate until the settlement for one reason or another is finally abandoned. 182

CRIME AND PUNISHMENT

681 626 Law and the administration of justice among the Barama Caribs are confusing to the civilized mind because, generally speaking, they lack explicitness. As is the case with many primitive groups, therefore, it is necessary to study behavior and attitudes under this head from the functional point of view. Thus broadly considered, law is simply that body of opinion within a group which regulates the behavior of the members of the group. The law performs this function in a twofold manner. First, it defines those actions which are considered offensive to the group as a whole or to individual members thereof. Second, it provides punishments for such offensive actions. The administration of justice, on the other hand, as distinguished from the body of the law itself, we may say has the following functions: first, determining whether or not an offense has been committed; second, fixing responsibility of guilt; third, designating the manner of carrying out the proper punishment or retribution and naming the agents, agencies, or assisting parties, if any, involved. These, I believe, are functions which we may ascribe to law and justice in all cultures. They are functions which lie at the basis of group life and are implied in the continued existence of any organized group of human beings who are living together in society. Without the performance of such functions in one guise or another, the group speedily disintegrates under the disrupting strain of endless unresolved disputes. Such functions are not, however, always obvious; they may be performed formally or informally, publicly or privately, by group or by individual action.

671 Among the Caribs, the publicized, formal aspects of the performance of the legal and judicial functions are minimized.[1] There is in this society no formal enactment of rules of conduct, either by decree or by legislation, there is no constituted legislative

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[1] "There was apparently no such thing as public punishment, except perhaps in the case of adultery among the Orinoco Carib, where the whole village populace dealt with the guilty parties. Certainly of the island Carib it is said they know not what it is to punish publicly, or to observe any form in the execution of justice; nay, they have no word in their language to signify justice or judgment." Roth, 1924, *An Introductory Study of the Arts, Crafts, and Customs*, p. 557.

"La Justice, chez les Caribes, n'est point exercee par le Capitaine, ni par aucun Magistrat: Mais tout de meme que parmy les Toupinambous, celuy que se tient offensé entr'eus, tire de son adversaire telle satisfaction que bon luy semble, selon que la passion le luy dicte & que sa force le luy permet. Le public ne s'interesse point dans la recherche des crimes." de Rocheforte, 1658, *Histoire naturelle et morale des Iles Antilles de l'Amerique*, p. 467.

assembly, nor is any individual endowed with the authority to 671 make regulations for the other members of the group. The Indians are, of course, without writing. And, as might perhaps be expected under such conditions, there is also an absence of what might be called courts or judges. How, then, are the legal and judicial functions, which we have just mentioned as being necessary for group life, performed? Let us look for a moment more closely at the social organization in an effort to throw more light on the question.

The factors of tribal unity are territory, language and certain 619 culture traits which are held in common, but are distinct from those of other tribes. Within itself, however, the tribe as such has no political functions and little social importance. The political unit is the settlement, a group varying in size from fifteen to fifty individuals who live and cultivate fields in the same immediate vicinity. These groups are located at wide intervals, usually in the jungle back from the river, and contact between them is consequently not close. Over each settlement is a headman whose authority, however, is decidedly limited and without sanctions. The headman is generally chosen by acclaim for life, or for the 622 term of the existence of the settlement, by the adult men of the group. Several factors enter into his choice: his personality, his economic power, his physical strength. Occasionally a son or other relative of a former headman may be chosen, although such a relationship is by no means the deciding factor. In so far as the headman's personality carries weight, his opinions are respected and in that sense might be construed as part of the law, but few sanctions pertain to him which are not included among the prerogatives of the other members of the group as well. In other words, the headman has no special power to enforce his orders, and in case they are violated, punishment of the offender follows the lines laid down for all personal offenses.

As has been already stated, there is no constituted law-making 623 body or legislative council. It is true, of course, that the adult 626 men of the settlement do consult together on a great range of matters, but these consultations usually take the form of individual exchanges of opinion, much as gossip and conversation take place among ourselves. The only occasion on which all the men of the settlement are likely to be together is during one of the

626 periodic drinking bouts or sprees, which are sociable rather than
623 legislative gatherings. On these occasions opinions are naturally exchanged, but such interchange can no more be considered legislative enactment than the informal airing of views which takes place in our own society among men, for instance, at a dinner party, smoker, or farmers' picnic. In short, there is no organization for debate or for the determination of the group will and, naturally, no provision for the codification of law.

671 The law of this society, in other words, is customary and tradi-
626 tional law. It is doubtless subject to change, as in the long run are all social phenomena. But, as one would expect *a priori*, and also on the basis of information obtained from older informants, I believe that such change is unconscious and probably much slower
[867] than is the case with most codified legal systems. A Carib child is brought up to know what is considered right and what is considered wrong. By the time he reaches adulthood he knows what his rights and obligations are in any situation within his culture. What we are here calling the principles of law and justice are, consequently, as integral parts of everyday life to a Carib as, for instance, the necessary functions of his body. Such an unconscious assimilation of the law is workable among these people because the simplicity of the society limits the number of possible situations in which an individual would be called upon to exercise his knowledge of legal rights and duties. In a more complex social organization, on the other hand, the ramifications of relationships would seemingly demand a greater specialization in legal and juridical matters than is necessary here. Because everyone is well informed regarding the customary and traditional rules of conduct, the Caribs have little need for self-conscious law-making.

The distinctions between public and private offenses, between criminal and civil law, which play so large a part in the legal concepts of the higher cultures, have little importance among the Caribs. A distinction is present, in the native consciousness, however, between what we may call social and religious offenses, between offenses against human beings and offenses against spiritual powers. It is one thing to trespass on the rights of a fellow man and another thing to transgress a religious tabu. Breaking of a tabu is automatically punished only by the spiritual powers concerned, whereas the punishment of an offense against a human

being involves the human factor. This section is primarily con- 671
cerned only with the secular aspects of law and justice, in so far 626
as they can be distinguished. Examples of a positive and of a
negative religious rule may be found in the section on Religion. 688

The infringement of a religious rule of law brings unpleasant results, but there is frequently no idea of obeying the rule as a good in itself. A Carib is surrounded by a vast army of spirits, spirits of the bush and of the streams. Some are characteristically mischievous or malevolent, others are merely finicky and jealous of their rights, which include the treatment to which they are entitled. A Carib must follow the rules of conduct which will keep him out of trouble with the spirits. When he wants positive responses from the supernatural powers, he consults a medicine man or piaiyen. It is practically impossible for a layman to attract the favorable attention of the spirits directly.

On the secular side, law and justice are highly personal. Only 627
in cases, to be described later, in which an individual by the
multiplicity and pertinacity of his offenses makes himself a public
nuisance or a public menace do the members of the group take
united action against him. And in such cases it appears that the
group action is taken as the result of a sum of individual grievances
rather than from a conscious sociological consideration for the
welfare of the group as an entity.

Practically all secular offenses are punished by the victim, or as we would say, the plaintiff, who is assisted in certain cases by specialists having mastery of techniques involving spiritual powers. A man's brothers, real or classificatory, will assist him in these matters upon occasion. The latter practise furnishes the basis for a loose sort of collective responsibility. Signs of a formalized grouping of relatives are, however, lacking.

In a group such as this, where public law is all but excluded by 577
private law, little attention is paid to abstract ideals of right and
wrong. A Carib is only mildly interested in offenses suffered by
other individuals. Adultery, for example, is regarded as a delight-
fully exciting game except when one's own wife becomes involved.
Retribution is therefore the important factor in punishment.

The most serious offenses are homicide, poisoning, use of sorcery, 682
theft, and adultery. Homicide is justifiable when used as retribu- 627
tion for a clear case of adultery or when it is obviously due to

682 accident; in all other cases it is subject to retribution. Poisoning
627 may be distinguished from homicide in cases where it is not fatal;
poisoning itself is used as a form of retribution, but secretly, and
[754] in any case, if the poisoner is discovered, the intended victim
feels that an offense has been committed against him. The same
is true of sorcery which is used as a means of retaliation. Practically
speaking, however, if a Carib who has committed an offense
discovers his victim using either poison or sorcery against him as
a retaliation, he devotes his efforts to self-protection rather than
[208] to counter retaliation. Public opinion supports the use of poison
and sorcery as means of retaliating for an unprovoked offense.
On the other hand, the use of these measures because of mere
dislike, sadism, drunkenness, or anger is regarded as offensive and
properly to be punished.

685 Theft is the misappropriation of another individual's property.
All goods are individually owned among the Caribs. A man owns,
for instance, his field, house, hunting and fishing equipment,
canoes, ornaments, tools, the game he has bagged. A woman
owns the implements which she uses in field and house, the pottery
which she makes or acquires, the basketry (which is made, however,
by the male members of the family), her clothing and ornaments.
[177] Where the Indians have come in contact with prospectors
for gold, each man has private ownership in the gold creeks which
424 he has discovered and which he may sell. A sorcerer and a medicine
551 man each has ownership in his techniques and knowledge. All
the foregoing types of property are alienable in one way or another.
But each individual may also be said to own his or her personal
name, which is alienable under no circumstances. To prevent theft
and magical misuse of the personal name, an Indian guards it
closely and allows only trusted intimates to know what it is.
Names, for example, Big Frog, Curly Hair, Haimara (a fish), are
invented by the mother and given to the child in infancy. They
are based on supposed resemblance of the child to some animal
and imply a faint spiritual bond between the person and said
animal.[1] Communally held forms of property, if they may be so
called, are certain songs and traditions.

000 As in many primitive communities, in spite of the importance

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[1] This is, however, only a hint of personal totemism or guardian spirit concept. I have found no trace of a set of formulated rights and duties between the person and the animal involved.

431 AS IN MANY PRIMITIVE COMMUNITIES, IN SPITE OF THE IMPORTANCE of personal ownership, no member of the group is allowed to go in want. In all activities there is much sharing of property. It is distinctly understood, however, that all such sharing takes the form of giving and receiving, or of lending and borrowing. Anyone, therefore, who makes use of goods clearly not his own, without making a suitable arrangement with the rightful owner, is guilty of theft.

684 Adultery[1] is intercourse with the recognized mate of another individual. Personal attentions on the part of a man to a married woman are punished as adultery because they have but one meaning to a native. However, dalliance with an unattached girl is not considered adultery.

671 In the first two of these offenses intent, contrary to the practise of some primitive tribes, plays an important part. Accidental homicide and accidental poisoning, if the case is clear, do not call for satisfaction. Regarding sorcery, theft, and adultery, it is almost impossible for the Carib mind to conceive of the commission of these acts without malicious intent.

The Carib philosophy on the matter of intent, stated in our terms, follows the reasoning that accidents are to be classed along with that whole group of natural incidents which are often injurious and inconvenient to human beings. The causes, however, are spiritual or supernatural, and the results are due to transgression, perhaps unconscious, of a tabu. If a man kills or poisons another through accident, he is merely acting as unconscious agent of the spiritual powers who constitute the effective agent and cannot be punished. Personal antagonism, in such a case, is eliminated, the solidity of the group is unaffected, and retaliation has no function. But when a man commits an offense of his own

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175 [1] Adultery was introduced after white contact among the Caribs of the islands, according to Rochefort. Says he, "Heretofore they knew not how to punish this crime, because it reigned not among them before their commerce with the Christians; but now if the husband surprises his wife prostituting herself to some other or have otherwise any certain knowledge of it, he does himself justice, and seldom pardons her, but dispatches her, sometimes with his club, sometimes by ripping up her belly from above downward with a razor or the tooth of an agouti, which is nearly as sharp. This execution being done, the husband goes to his father-in-law and tells him in cold blood, 'I have killed thy daughter, because she proved unfaithful to me'. The father thinks the action so just that he is so far from being angry with him, that he commends him, and conceives himself obliged. 'Thou hast done well,' replies he, 'she deserved no less.' And if he hath any more daughters to dispose of he immediately proffers him one of them, and promises to bestow her on him at the first opportunity." de Rochefort, 1658, *Histoire Naturelle et Morale*, pp. 548–549, quoted in Roth, 1924, *An Introductory Study of the Arts, Crafts, and Customs*, pp. 561–562.

In early times on the Orinoco, according to Gumilla, all recognised adultery, "notably when women commit it, but the Carib is the only nation which has a punishment fixed for adulterers, who are put to death by the whole village populace in the public place." Gumilla, 1791, *Historia natura, civil y geografica de las naciones situadas en las riveras del Rio Orinoco*, Vol. I, p. 132, quoted in Roth, 1924, *An Introductory Study of the Arts, Crafts, and Customs*, p. 562.

671 free will, that is "with intent," the origin of the cause can be reached and compensation extracted.

681 To obtain satisfaction from one who has committed an offense against him, a man may have recourse to one or more of the following media of action: (1) poisoning, (2) sorcery, (3) violence, (4) kanaima. And the group may resort to (5) violence, (6) ostracism and (7) exile to rid itself of an undesirable member. The first four types of punishment may be called private, the last three public. Again, private violence and all group methods are overt, whereas poisoning, sorcery, and kanaima are secret.

278 Poison may be administered either in food or drink. The most common practise is said to be to insert some of the poison in the cassiri or paiwari when the drink is handed to the intended victim during one of the periodic drinking bouts or sprees. The liquor is passed to guests at a drinking bout in calabashes, and the approved technique of poisoning consists of placing some of the poisonous material under one of the finger nails, which in the act of passing the calabash is allowed to slip into the liquor.[1]

Varieties of poison are as follows:

(a) The most dangerous poison is said to be the ashes of the bloody apron (wawrish shamisharu tupuru) worn by a menstruating woman. This poison will cause the victim to vomit blood.

(b) The poisoner's finger nail, scraped fine and put in the drink, is regarded as a deadly poison for all persons except the administrator.

(c) Bottle glass pounded fine is a reliable method and is said, with good reason, to be the quickest of the poisons.

(d) The bones of any snake, burned or dried and subsequently powdered, are regarded as poisonous.

(e) Paito, a small fish which when burned gives a supposedly poisonous ash, is also administered in drink.

As might perhaps be expected, an antidote may be used for all of the above poisons with the exception of c. A tea is brewed from the leaf of a certain tree (muritchawa), which when imbibed causes vomiting. This brew must be made in secret in the afternoon, put out in the evening dew to cool, and must be drunk before retiring and immediately upon rising, so that vomiting takes place twice.

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[1] This technique in poisoning is reported from several other Guiana tribes. See Roth,1924, *An Introductory Study of the Arts, Crafts, and Customs*, pp. 562–564.

The aremi emu is a professional sorcerer whose services may 754 be enlisted to obtain satisfaction for a crime. The aremi is to be 791 distinguished from his contemporary, the piaiyen or shaman, by the fact that the latter's functions are more decidedly religious and healing. In training and technique these two functionaries differ. The piaiyen's chief tool is the maraka, a rattle made from an empty calabash containing pieces of quartz which represent certain classes of spirits: the aremi does not use this paraphernalia as he does not have control of these higher spirits. The piaiyen puts himself into a trance-like state for communication with the powers by the drinking of tobacco water, whereas the aremi drinks pepper water, which produces a more violent reaction resembling fits. Now if a man has a grievance against another, he will go to the aremi in secret and ask him to take the case. 754 The sorcerer's procedure with the intended victim is as follows. After getting in touch with his spirits by drinking pepper water, he will arrange to get near the victim in a casual manner. He will pick up some small object, blow tobacco smoke upon it, and without being noticed, will throw it onto the victim. The consequences depend upon the type of object which is thrown; for example, a piece of offal will cause the victim to rot away, a piece of wood will make him stiff. But these results will not appear unless the aremi has first blown tobacco smoke on the object. The tobacco smoke seems to be the embodiment of the aremi's power. For instance, he may merely draw near his victim and blow tobacco smoke on the unfortunate individual, making a wish at the time. If the smoke touches the victim, the wish will come true. Examples are related of men who have been turned into monkeys in this manner.

The victim, however, may save himself. If he feels that some harm is being done to him, he consults another aremi, who undertakes to discover who or what is doing the damage. An aremi can make such discoveries because he, with the help of his pepper water, can see and consult spirits in the night. He can see in a dark room as if a light had been lit. Having taken a case, he therefore works during the night, and next morning makes known his diagnosis to his client. He tells the client who is doing the mischief and why; and he prescribes certain food tabus which will neutralize the trouble-making machinations of the rival practitioner.

754 (If a client, in his ignorance, is unfortunate enough to consult the same aremi who has served his persecutor, this fact is concealed by the aremi in question, who proceeds to do more harm to the victim.)

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791 A piaiyen does not usually use his power to obtain revenge for other persons, but he may use it for his own purposes, that is, to obtain redress for an offense against himself. His procedure is as follows. He removes one of the small spirit stones (tarikano) from his maraka, swallows it, takes a long puff of tobacco smoke, and points his hand at the victim. If he wishes to kill, the stone passes entirely through the body of the victim; if he wishes merely to cripple, the stone remains in the victim's body. In either case the wound is invisible. It is part of the training of the piaiyen to learn the technique of shooting. Upon swallowing the missile, the piaiyen moves his left hand from his neck to the right elbow joint, where the missile is held as in the magazine of a gun. Several "shots" may be kept in this storage space just above the right elbow joint. It is believed that a tube somewhat like the barrel of a gun extends from the piaiyen's neck to the elbow joint, and from the latter point to a small opening between the bases of the first and second fingers. I have several times been shown small scars which purport to be openings for the missiles of this anatomical shooting apparatus. With the "shots" held above the elbow joint, the piaiyen, when ready for action, takes a long inhalation of tobacco smoke and extends the right forearm in the intended direction. The force of the smoke is believed to be the physical agency necessary for the ejection of the shot.

755 If a man suspects that he has been the target of a piaiyen, he may consult another piaiyen, who will endeavor to remove the object from the patient's body. Practically speaking, this means that the supposed victim feels pain in a certain part of his body. He goes to a piaiyen who explores the spot with his hand and locates the offending missile. He then blows tobacco smoke on the spot and sucks out the stone, if it is there. In case the stone has passed entirely through the body of the victim, the operator obtains only blood as the result of his efforts. This sucking can be done anywhere, but if the trouble continues, that is if the rival piaiyen shoots further stones into the body of the victim, the healing piaiyen and his patient retire into the toakai, or consulta-

tion room made of palm leaves. Here the practitioner calls the 755
spirit which is harming his patient. He tells the spirit that it must desist, otherwise he will call the tiger spirit, which will devour the offending spirit. The theory of the above described shooting process is this. Although the piaiyen is spoken of as shooting his victim, he ceases to be the active agent once he has convoked a spirit. The stones which are projected are used by the spirits in the same way in which arrows are used by human beings. The piaiyen is a passive agent at the service of the spirit.

Direct personal retribution for an offense may be used in cases 684
where the culprit is caught red-handed. If a man surprises another 627
committing adultery with his wife, immediate violence will be the 578
result. Fists, cutlasses, bows and arrows, or guns will be employed. A good many petty grievances also come to blows, usually disputes arising during cassiri sprees. When a man is sober, he prefers to seek satisfaction in a more secret manner. It sometimes happens that, as a result of a fight, two settlements are officially at odds with one another; members of the respective settlements are forbidden by a consensus of opinion to have anything to do with those of the other. In case a member of one settlement transgresses this prohibition and enters into friendly relations with the other group, the headman of his own group may attempt to use either oral or physical coercion to enforce conformity.

Perhaps the most interesting of the forms of personal retribution 794
is kanaima, a cult which is found among practically all of the Indians of the Guianas.[1]

If all other means of obtaining redress have failed, a man may decide to become a kanaima. This is a very serious step because it means that he must leave family and friends, must undergo extreme privations and social ostracism, must devote all his life and energies to the accomplishment of his purpose. The facts concerning this strange cult are difficult to determine because I have not succeeded in interviewing any individual who would admit having been a kanaima. This indicates that membership in the kanaima cult is itself an offense, while on the other hand it may be used as a path to punishment. The beliefs and attitudes concerning the cult are, however, herewith briefly set forth.

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[1] Roth, 1915, *An Inquiry into the Animism and Folk-lore of the Guiana Indians*, Chap. 18. Farabee, 1924, *The Central Caribs*.

794 If you wish to become a kanaima, you establish contact with a kanaima headman, who can usually be found hiding about in the bush. He teaches you the art. During the novitiate you sleep at home, but spend your days in the bush with your teacher. You are taught to enter houses without being seen, to twist joints and manipulate bones, to benumb the senses of your victim, and so on. One of the disagreeable features of the cult is that the members find the habit of evil doing difficult to break, so that after accomplishing the original purpose of revenge, the kanaima [691] continues to practice his outrages on innocent victims. For this reason, kanaimas are feared and may be killed on sight by all normal persons.

794 824 Kanaimas lead an abstinent life. They eat no meat, with the exception of the djokoro (dukwaru) bird, which, because it is not easily seen in nature, is believed to make them invisible. Other meat is believed to make them heavy footed. They eat a pimpler palm called kosako because doing so causes the kanaima's victim to have the sensation of being choked and pricked. They eat rupe, a white fungus which grows on dry wood, because it makes them light so that they can run fast. They drink only rain water which has collected in the hollows of leaves; creek water is not imbibed because it is running too strongly and makes the kanaima lose control of himself too easily, while the rain water is clear and makes him clear headed. At night they rub their skins with pepper, instead of building fires to keep them warm. As a result of these austerities, it is said that no animal will eat the body of a kanaima, the flesh being too rank.

794 754 [824] It is believed that kanaimas roam about the bush waiting for an opportunity to waylay a victim. Across the trail they stretch a spider web on which is rubbed the juice of a plant called kuraru. When the victim touches the web, he falls as in a trance, whereupon the kanaimas leap upon him, twist his joints, and stretch his tendons. They also carry a black powder made from the dried powdered root of a plant called masi. This powder, put in the mouth of the victim, makes him cough and sneeze and get a cold. If it is swallowed, the viscera decay. Victims usually do not remember enough of their experiences to talk about it afterward, but to prevent any possibility of betrayal, the kanaima may pierce the tongue of the victim with a snake's fang which he

carries for the purpose. When they have finished their work, the 794
kanaimas disappear, leaving their victim to regain consciousness 754
alone. After a time he picks himself up and goes home where he
soon develops fever, has aching joints, and speedily dies. Due to the fact that he cannot or will not talk, the unfortunate sufferer's friends and relatives are able to obtain no particulars which would enable them to seek out the kanaimas. The work of the kanaimas can, however, usually be recognized by the blue finger marks on the body of the victim, bruises left by the kanaimas while manhandling him.

There is no cure for the fever and "bone ache" resulting from 755
an encounter with kanaimas. The kanaimas must simply be 824
avoided. A small beeswax image made in the shape of a man, if carried in the bush, enables one to spot the anaesthetizing spider web, and often the kanaimas themselves, before harm can be done. A certain plant with roots resembling a closed fist, if hung in the house, frightens kanaimas away. As an antidote for the black masi powder taken internally, the slimy inside bark of the congo pump tureke is made into an infusion and drunk. (Sarusaru congo pump is not used for this purpose.) If the kanaima has put the powder on the victim's skin, the black banana sucker (mekuru myu) is pounded, soaked in water, and applied to the skin. After the kanaima victim has died, further precautions must
be taken. The kanaima, to complete his task, must visit the grave 794
and suck the waters of decay from the body, usually through a 755
hollow reed which is inserted into the ground. If the kanaima does not succeed in drinking the body liquids he will die a horrible death; they purify his body in some way after the perpetration of the outrage. To forestall the kanaima, the body may be wrapped in the leaves of the small banana (puma' bu), which are poison for kanaimas, but not for other persons. Or the juice of the haiari (a fish poison) is mixed with some of the body waters and placed in a bowl on the grave. A kanaima's one aim at this point is to drink some of the body juices, however this may be accomplished. Finding in a bowl on the grave some of these juices, the taste and odor of which completely obliterate the slight acridity of the haiari, the kanaima is believed to drink unsuspectingly and thus be deceived.

In comment upon the beliefs regarding kanaimas, it must be 794

794 said, first, that there can be no doubt that such beliefs do exist. Whether or not, on the other hand, this cult actually exists I am unable to say with certainty, because none of my informants would admit having used this method of punishment, nor was any of the several hundred men with whom I came in contact pointed out as being, now or formerly, a member of the cult. But examples of former members of the tribe killed as kanaimas were recited. Such findings are, of course, perfectly in consonance with the beliefs regarding the cult, because discovery of membership means instant death at the hands of non-members. On the theory that where there is so much smoke there must be some fire, I am inclined to believe that there is such a cult of avengers, voluntary outcasts who, with the aid of black magic, devote a period to vengeance and possibly to purely malicious mischief. Nevertheless, it seems that many of their activities are grossly exaggerated parts of the folk-lore, and that many undesirable phenomena and uncomfortable bodily symptoms of other origin are erroneously attributed to them. In any case, the mere fact that they are believed to be effective agents of punishment justifies a consideration of the subject in a discussion of Carib penology.

626 So much for the personal methods of punishment and retribution. Occasionally a member of a group acquires a reputation among his fellows as an undesirable character. He may repeatedly pilfer from others' fields; he may trouble the women, be lazy, show himself ungenerous, constantly pick quarrels, or make himself obnoxious in other ways. The men of the settlement will talk to him, but if he does nothing to improve his position in their eyes, he will be advised to leave on pain of having life made very unpleasant for him. If he persists in remaining, he will find that he and his family are social outcasts; they are not invited to drinking parties; he will be unable to borrow anything; he will get no help in hunting, fishing, field cutting, canoe building, or other activities in which the men assist one another, nor will his wife receive aid in her occupations; his household will be excluded from the water-hole and bathing place. In short, he will lose all advantages of group life. In aggravated cases, the other men may beat him or even kill him, if he fails to take the hint. Ostracism within the group and violence are, however, seldom necessary. Such a man with a vestige of common sense "clears out while

the going is good." I know of one man on the Barama who has 626
been ejected from six consecutive settlements in this way, so that he has become a permanent outcast.

It is apparent that the great majority of punishments are 627
handled by individuals. The tendency is to carry out the retali- 182
ation as secretly as possible. But why this bashfulness and fear 621
of coming out into the open when settling accounts with a wrongdoer? The Caribs, when questioned directly, reply that secrecy prevents further reprisals and also prevents the culprit from protecting himself against a deserved punishment. I believe that the social function of keeping these matters under cover is to prevent rifts from reaching the surface, so to speak, and thus splitting the group apart. A Carib group lacks strong central authority of any kind. In the absence of adequate political, judicial, or police authority, secretive methods of punishment have evolved as the only possible means of enforcing the "law" without destroying group life. When a man sets out to punish an offense he usually attempts to keep his activities secret, not only from the object of his punishment, but also from other members of the settlement. Only rarely is open violence resorted to or are other members of the group, such as relatives, admitted to the case.

It may be asked, however, if the looseness of the group is not due to the unorganized condition of the legal and penal programs. It is obvious that the absence of a socialized or public method of determining guilt, such as a court, leaves many of the antagonisms in society uncomposed. It is true that cases which come out into the open and are punished openly, such as the killing of the adulterer, appear before the court of public opinion. But many grievances, as we have seen, are handled secretly, and the guilt of certain parties is often based only on suspicion. In such cases punishment may fall on innocent parties, who naturally take offense and retaliate. Consequently, the solidarity of the group is likely to suffer.

Ignoring the theoretical question as to the relative effect of external as compared with internal conditions on the institutions of a society, I believe that in the case of the Barama Caribs external environmental and political factors have played the preponderant part in molding the institutions of this society as they

621 627 182 exist at present. In this region a hunting, fishing, and agricultural life restricts the size of the group and isolates it. Only a small group with a wide territory about it can exist, if the people are to have sufficient animal food. Furthermore, the available crop-raising soil in any one spot will support only a small population, because of the fact that cassava requires a drained sandy loam, a type of soil which is found only in small and widely scattered areas in the jungle. This soil, even when located, will, however, produce only two good crops, after which the field must be abandoned and a new one cut, making the disposition of the fields and the membership of any given settlement unstable. Even the term of existence of the settlement itself is usually limited. Hunting operations as carried on here also make for social instability and individuality, because hunting can be done most successfully by one man and seldom in parties of more than four. It is also often necessary for a man to be away from home for several days following game, and since whenever possible a Carib takes his wife and children with him when he is away over night, this factor also contributes to the looseness of the established group.

177 621 Even so, it seems that a stronger organization than the present was formerly maintained for purposes of war and defense. Since the early part of the nineteenth century, however, the European political control of the colony has succeeded in repressing intertribal warfare. With their cultural background, therefore, the Caribs have found environmental conditions and exterior political conditions unfavorable to the development of political power and group solidarity. As a consequence, I think, legal, judicial, and penal institutions which otherwise would support such a solidarity, show little formal development.

RELIGION

776 **Supernatural Beings.** The Carib world is jointly inhabited by human beings and a number of supernatural powers. There are two kinds of supernatural beings, spirits and ghosts. The former are independent beings or powers, the latter represent the souls of dead human beings. (Spirit, akuru; ghost, yumbupa akasang.) The supernatural beings of the first class, which we will call spirits, inhabit the land, the water, the air, and at some time

or another may be associated with practically every natural and 776
man-made object in the universe. The average layman is wary
lest he trespass upon the rights of the spirits or displease them
in other ways, but he is often rather hazy as to their attributes
and powers. In regard to higher spiritual affairs the layman is
as a rule required to take a negative attitude, for generally speaking,
his positive pleas and requests to the most powerful spirits
can be conveyed only through the medium of a piaiyen (medicine
man or priest) or an aremi emu (magician or sorcerer). [791]

In charge of the whole universe is a sort of literary diety, whose
name is not known even to the piaiyen. This supreme being is
so remote from the life of men that his characteristics are only
indefinitely known and are little discussed. He is the supreme
power or creator, the first cause, as it were. The priests do not
pretend to be able to talk with this head spirit as they can with
certain of the lesser supernatural beings; they have never seen
him or had any personal dealings with him. He is called iopotari
akuru ("boss spirit") and it is insisted that he "fixed everything,"
that he got the universe started, and even, it seems, had dealings
with human beings in remote times. In one of the myths we have 773
the story of the primeval contest, or race, between the several 776
species of animals, heavenly bodies, and so forth, a competition
which was arranged by the iopotari akuru as a method of judging
the attributes of various things so that they could be assigned to
their rightful places in the scheme of the universe. In another
myth it is said that a long time ago, this spirit called the people
to come to him in the bush. One man of the group he took with
him into the forest and changed this man into the appearance of
a typical bush spirit, or epo, that is, a being with a long thin body
covered with hair, equipped with projecting brow ridges, and
devoid of an anus. The humans were naturally alarmed when
the man returned. So when the spirit called them to come again
they refused. This vexed the head spirit, and ever since that time
certain bush spirits under his direction, called epos, have seized
and eaten human beings whenever they have had the opportunity.

The head spirit is also, for instance, responsible for the moon [821]
and the stars. The nature of these celestial bodies is unknown to
the Indians, but the fact that they are believed to have been
included in the primeval competitive race suggests an animistic

776 identification. Once the heavenly bodies were started in the race,
773 they could not stop. Ever since that remarkable event, the stars
and moon have continued in their endless flight about the sky,
and the creator spirit has now fixed them there in the celestial
steeplechase forever. Regarding the phases of the moon, it is
believed that the creator spirit causes it to swell and deflate itself
in regular periods so that men may keep track of time as it passes.

776 Little more seems to be known concerning the head spirit. He is remote, but at the same time all pervading. On the whole he is beneficent, but he, like other spirits, is given to phases of anger, as shown by the incident involving the transformation of the man into spirit guise.

The creator spirit is assisted by a chief lieutenant who is called Komanakoto, a name which is also applied to the original medicine man, although it is insisted that there is no identity. Komanakoto acts as the managing executive of the universe, devoting more attention to detail than does the supreme spirit. But he is also far removed from the affairs of men in these days, despite the fact that it is possible for a medicine man who has become well acquainted with all the other spirits in the pantheon to succeed in establishing contact with him. This, however, is possible only for a medicine man of long and successful experience.

It is obvious that the ideas of the Caribs regarding a supreme
being are poorly developed and impersonal, but there seems little
reason to suspect that the rudimentary notions which we have
just described are in any way due to Christian influence, for in
[177] general they seem to agree with the beliefs held by the Guiana
Indians in the earliest records.[1] Gumilla, for instance, speaking of
the Caribs of the Orinoco, says, "The Caribs call God Quiyumocon,
i.e. Our Big Father, but it is not sufficiently clear whether they
mean by this expression the First Cause or the most ancient of
their ancestors."[2]

On the Barama I have been unable to find agreement with Roth's statement, apparently concerning the Pomeroon Carib, that "the present-day British Guiana Carib name for God is . . .

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[1] Roth, 1915, *An Inquiry into the Animism and Folk Lore of the Guiana Indians*, p. 117, "The native tribes of Guiana had no idea of a Supreme Being in the modern conception of the term."

[2] Gumilla, 1791, *Historia natura del Rio Orinoco*, quoted in Roth, 1915, *Animism and Folk Lore*, p. 117.

776 Tamosi-Kabutana, Old Man-Sky (Kabu-the Sun)."[1] Nor do the Barama Caribs worship, so far as could be discovered, the Sun or the Moon, as is said to have been the custom among earlier Carib groups.[2]

Indefiniteness concerning the name of the supreme being has been encountered by other investigators, for instance, Roth, who remarks, "It is very noteworthy that . . . discrepancy as to the alleged word for God is at once apparent in almost all the Creation myths of the other tribes that so far I have managed to unearth."[3]

773 In our collection of myths, which constitutes the following section, will be found explanations of the origins of certain things, particularly in Myths 1, 2, 3, and 13. But no well elaborated or comprehensive origin myth was forthcoming from informants on the Barama. Aside from the myths just mentioned, no allusions to the beginning of things were ever made, and the recitation by the investigator of origin myths from other Carib tribes elicited no response. On the Barama the name Lonquo or Longwo, the alleged First Man of the Island Carib, is unknown. According to La Borde, "Lonquo was the first man and a Carib. He was not made of any other body; he descended from the sky and lived a long time on earth. He had a large nostril from which, as also from an incision in his thighs, he produced the first men."[4] Roth alludes to Bolingbroke's description of Longwo as the first man in the Indian belief of the "central parts," of British Guiana.[5] No elements of this belief were found on the Barama, and recitations of the story were met with interest, but also with professions of ignorance. Nor do the Barama Caribs attribute their origin to descent from "tigers," as reported from the Achagua by Gumilla.[6]

In short, the Barama Caribs leave the question of ultimate origins entirely in the hands of the great creator spirit, and bother their heads little concerning the details.

776 When we turn, however, to a consideration of the more specialized spirits of nature, we find that the Barama Caribs have well

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[1] Roth, 1915, *Animism and Folk Lore*, p. 118. Incidentally, the Barama Carib name for sun is weyu.

[2] "It is known that the Chaimas, Cumanagotos, Tamanacs, and other original tribes of the Carib people, worshipped the Sun and Moon," Roth, 1915, *Animism and Folk Lore*, p. 118.

[3] Roth, 1915, *Animism and Folk Lore*, p. 118.

[4] *La Borde*, 1886, *History of the Origin, Customs, Religion, Wars, and Travels of the Caribs*, pp. 226-228.

[5] Roth, 1915, *Animism and Folk Lore*, p. 141.

[6] Gumilla, 1791, *Historia natura del Rio Orinoco*, p. 113, quoted in Roth, 1915, *Animism and Folk Lore*, p. 143.

776 defined beliefs. The affairs of the natural world are under the direct, although not comprehensive, charge of five classes of spirits, which are directly approachable by the medicine men. Each of these five classes or orders of spirits is believed to be related to an original or major spirit in somewhat the same way that a human family is related to its major ancestor. Piyumari is the generalized land spirit particularly associated with the forest and is regarded as more or less benevolent. Masi is the spirit of the air, regarded as omnipresent, as a spirit which sees and knows everything, and which on the whole is looked upon with some disfavor by the medicine men who find him intractable and hard to deal with, and by laymen who say that he does more harm than good. Lakai Akani is the spirit of the waters, the creeks, and rivers. Ume is the spirit of the hills. Mawari is concerned with many miscellaneous affairs such as houses, sickness, industries.

Each of the five names mentioned is associated not only with an individual supernatural being, but also with a class or order of spirits. Thus Piyumari, for instance, is the name of the chief spirit of the order bearing the name of Piyumari, which has the land and forest under control. All the spirits in a given class are equal, all represent without distinction the power pertaining to the class of spirits to which they belong. Each is equally powerful in much the same way as we think of all the members of a monastic order, for instance, as theoretically possessing equal holiness.

776 Each of these orders of spirits is represented by a stone of a
823 distinctive color or texture: blackish stone (basalt or gabbro) for
791 Piyumari, quartz for Masi, rough sandstone for Ume, greenish jadeite (?) for Makai Abani, and limestone for Mawari. A piaiyen, as will be described in more detail later, during the course of his career becomes familiar with a varying number of spirits depending upon his success. The spirits with which he can regularly establish communion are represented by small pebbles or pieces of stone enclosed in his maraka or rattle. Thus, a piaiyen who is able to work only with Piyumari and Masi will have only black stones and quartz in his rattle. When a neophyte completes his training for piai under an established medicine man, his teacher presents him with two stones representing respectively an individual of one of the above classes of spirits and that individual spirit's wife. It is believed that if the spirits are satisfied in their

association with a piaiyen, they will breed and multiply, so that as 776
time goes on an original pair of stones will be increased to a large 823
number, each one representing a spirit of the class to which its 791
parents belong. Additional spirits are always useful to a medicine man, as they increase his importance by being available for errands and tasks which he can assign to them.

The spirits with whom a piaiyen is in contact are not believed to live in the rattle at all times, but leave some of their essence in the material form of the stones enclosed in the rattle. Spirits are believed to live in the same way as men in settlements in the bush, hunting, sleeping, making merry, but remaining invisible. Their settlements are not always identifiable, but open spaces in the forest are often pointed out as the clearings of certain settlements of spirits. Thus, an open space caused by the fall of several trees in a high wind is said to have been made for the purpose of habitation by the bush spirits, and consequently is avoided by men. If only one tree has fallen, it is believed that the spirits started to make a clearing and changed their minds. The water spirits are thought to live in settlements under the surfaces of the streams.
Thus the Caribs, who have no anthropomorphic idols, neverthe- [778]
less pay a sort of respect to these stones contained in piaiyen's rattles and believed to represent certain spirits.

In addition to the five classes of natural spirits just mentioned, 776
there are a number of other types of spiritual beings whose con- 791
nections with the five major classes are more or less indefinite.

The akatombo[1] are regarded as malevolent or mischievous beings who are forever present, waiting to make trouble. Medicine men do not keep these spirits under their control. They come of their own accord to medicine men who chase them away. The
sorcerers, however, are more hospitable and sometimes have deal- [754]
ings with this class of spiritual being.

The tiger[2] spirit class is called ashushi. There are a number of different kinds of tiger spirits, just as there are a number of species of tigers in the bush. Other spirits are in fear of tiger spirits in the same way that men are afraid of actual tigers. Consequently, a

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[1] Cf. Roth, 1915, *Animism and Folk Lore*, pp. 152–153, "The mainland Caribs term a person's shadow *ai-akaru*, and the spirit resident in this head, his Dream Spirit *aka* or *akari;* but after the latter leaves the body for the forest permanently, it is known as *aka-tomba* (*sic*)." The Barama Caribs repeatedly rejected this identification, insisting that the ghost was called yumbupa akasang.

[2] "Tiger" is the creole designation of any wild member of the cat family. True tigers, of course, are not native to the Western Hemisphere, but since the term is used in much of the literature, it is employed here.

776 piaiyen usually has contact with one or more tiger spirits, who may be used by him to discipline the less ferocious spirits of his circle. 791 The tiger spirits are believed to be the ghosts of dead tigers. All other animals also have spirits, which become ghosts upon their [824] death. Boba root is used by the hunter as a protection against the spirit of any animal he may have killed. For instance, if he has [789] killed a tiger or any other animal which has a dangerous spirit, he scrapes the roots of the boba tree and makes a salve which he puts on his skin. Then he crawls under the buttressed roots of any large tree. The boba salve is believed to entangle the spirit of the dead animal so that it can do no harm to the hunter. In crawling under the roots, the hunter scrapes the spirit off himself. Animals [825] are also amenable to the machinations of spirits of beings and orders in addition to the tiger spirit. Thus, a dog that barks in its sleep is believed to be suffering from the interference of spirits. However, the only way in which a member of one of the five major classes of nature spirits can be killed (i.e. removed from interference in worldly affairs) is by being devoured by a tiger spirit.

776 Each cassava field is watched over by a spirit of the cassava called Piuku. The precise connection between this being and the 241 Ume or hill spirits, is not clear. It is believed that each hill in the bush is under the care of a group of Ume, who after the field is cut and cultivated, apparently abdicate in favor of the Piuku. The Ume live in a settlement of their own under the hill, which serves as a roof. The Piuku is not a member of the Ume order, but nevertheless it is not unfriendly toward the Ume. An abandoned field reverts to the Ume spirits, and in the rare cases of fields without cassava no Piuku is present. It is not believed, on the other hand, that each separate cassava plant has a spirit of its own, nor are the other plants of the field associated with spirits. Piuku is thus a sort of agricultural deity especially associated with cassava plants. Concerning the manifestations of the Piuku to human beings, an informant said, "Once my wife and I were digging cassava in a field. Nearby I hear a groaning m'm'm'm. I do not know what it is so I go to the piaiyen and he says it is the Piuku." Another informant said, "The piaiyen told me the Piuku is like a big white man big head, broad shoulders. Has a white skin covered with shiny buttons, but wears no clothes," a belief which is obviously acculturated.

However, each tree in the bush is believed to have a spirit of 776
its own (wiwi akuru: tree spirit) which must be placated when the 782
tree is cut. When cutting a field, care is taken to pour a mouthful 824
of cassiri on each stump. In return for this mark of respect the spirit formerly inhabiting the tree may remain in the vicinity, exercising a benevolent supervision of its old location until it finds a young sapling in which to take up its residence, or it may leave immediately for a new residence. If an offering is not made, the spirit of the felled tree will lurk about in an angry mood and bring trouble to the crops. Adolphus Tony, the headman at Parapimai settlement, says that he often hears the spirit of a large felled tree talking. It sounds like a man speaking at a distance.

A man must not sell a korial (dug-out canoe) immediately after (501)
he has finished building it because the spirit of the tree from which it is made will become vexed and cause the craft to warp or crack. However, if a proper offering is made when the tree, from which a korial is to be built, is felled, the spirit of the tree will come to the builder in his dreams and show him how to make the korial successfully. When a man finally does sell one, he places the goods which he received for it on the stump of the tree for a night. In one case, at least, the payment was even placed on the stump of a korial tree when I rented a korial from an owner for a month. No ceremonial, however, attends the actual construction of a korial.

When a bow is made, an offering must be left on the stump of the tree from which it was cut. If, however, the weapon is made from a fallen tree which has no visible stump, no offering is necessary because it is believed that the spirit is already gone.

The silk cotton tree (*Bombax* sp.) is distinguished from other 824
trees by the fact that it harbors a number of spirits, including a 776
special being which lives only in silk cotton trees (kumaka akuru). Other trees, with one exception, have only one spirit attached to each. When questioned, the Caribs reply simply that the silk cotton tree has a number of spirits because it is the biggest tree in the bush. Caribs refuse to cut down the silk cotton tree. The generally stated opinion is that this deference to the tree is due to the hardness of its wood, which breaks axes used to chop it. David of Sawari said that the axes were broken because of the strength of the spirits in the trees. MacDonald of Powis Hill sug-

824 776 gested that even if one succeeded in felling a silk cotton tree, it would be impossible to placate the many spirits in it. Concerning the parallel with West Africa in regard to the beliefs about this tree, Roth says, "the superstitions concerning (this) have been incorrectly surmised as communicated from the negroes to the Indians. . . . The superstitions of the *Bombax* were cherished in Middle America long before the arrival of the negroes: the Mayas of Yucatan spoke of it as the Tree of Creation, etc. under whose shade the spirit of mortals reposed."[1]

Another plant which possesses plural spirits is the washine, a species of bush rope which twines around the trunk of a host tree, completely hiding the latter, which usually dies and rots, leaving the washine standing upright with a hollow tube where the trunk of the host originally stood. The washine is thought of as a "strong" plant, inasmuch as it is thus able to strangle full grown trees, and it may be on account of its strength that it is credited with more than the usual single spirit.

It is related that "in old times" the people were being killed by the tree spirits which were then visible. They used to come and kill people by hitting them on the head with a sort of adze-like claw. People built fires under the trees and smoked out the spirits. The latter could be heard sneezing and coughing in the branches of the trees. The young spirits fell down and were clubbed to death by the people. Then the trees fell down and the older spirits escaped in the smoke. Since that time the tree spirits have been invisible. Originally they looked somewhat like people, although they had the peculiar type of claw mentioned above. Tree spirits were not covered with hair as are epos.

[791] It is said that a piaiyen who wishes to do harm to an enemy can talk with the spirits of certain trees which, when the individual in question is near enough, will cause their trees to fall over on him. This is, of course, an animistic rationalization of accidental deaths caused by falling trees.

776 The stream spirits or Makai Abani may be divided into those which inhabit the creeks and those which live in the rivers. The latter are sometimes specially designated as tona kanoko (water inhabitants). The creek spirits are thought of as being lesser members of the family which includes all the stream spirits. There is

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[1] Roth, 1915, *Animism and Folk Lore*, p. 229.

one spirit for each creek and one head spirit for each river. The 776
number of lesser spirits inhabiting each stream depends upon its size. It might be thought that the head spirit of the Barama River would receive special veneration, but I could find no evidence that this was the case. It is considered good, when reaching [788]
a part of the river on which one has not travelled before, to dip up some of the river water in the hand and allow a few drops to fall in the eyes. In this way one establishes communion with the river spirits of the new region. There seems to be little ritual connected with the river spirits which can be practised by laymen. Drowning and accidents on the river, as well as shortage of fish, are attributed to the displeasure of the river spirits, who may be propitiated by the piaiyen.

Each human settlement has its own spirit which exercises super- 776
vision of the people and houses. The house spirit is said to live 782
in the houses like the human inhabitants. When people are away, a stranger chancing upon the settlement can sometimes hear the spirits talking among themselves. These house and settlement spirits seem to do little either of harm or good if they are well treated. However, when the construction of a house is completed, the owner holds a spree and scatters some of the drink on the floor as an offering to the house spirit before offering any to the guests. This function does not have to be performed by the piaiyen.

Lines and trails have no special spirits, although they are under the jurisdiction of the bush spirits who happen to be operating in their vicinity.

We have yet to describe the epos,[1] grotesque beings which figure in the folk tales and which are to be met by travellers in the bush. They are said to be recognizable by the long dank hair which covers their whole bodies. Under the hair, the body of an epo is extremely thin, so thin that the waist may be surrounded by a man's hand. They have heavy superorbital ridges, a peculiarity which prevents them from seeing anything above them. When climbing a tree, for instance, an epo is forced to climb up head downward so that he can see where he is going. They are also distinguished in their lack of either buttocks or anus, and occasionally, it is said, the anal region is occupied by a bed of red hot

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[1] Apparently the same beings which in certain other tribes are designated as hebus. See Roth, 1915, *Animism and Folk Lore*, p. 173.

776 coals, which enables human beings to locate the epos in the night time. There is little evidence to show that in the Barama country the epos are associated with natural species or features of the environment in the same way in which, for instance, the tree spirits are. They seem to be free spirits of the bush, bent for the most part upon mischief. And from the point of view of holiness, they seem to occupy the lowest rank in the order of Carib supernatural beings. They alone can be seen and conversed with by laymen, and their nearness to ordinary mortals decreases the amount of respect paid to them in comparison with other spirits. A man may match his wits with an epo with a good chance of emerging the winner. As illustrated in Myths 7 and 8, men may sometimes play very uncomfortable tricks upon them. Thus the epos are the clowns of the Carib pantheon, spirits with whom men may carry on a good-natured, though serious, competition in the bush.

Certain other supernatural forces remain to be discussed later under the head of magic.

Ghosts and Death Customs. In addition to the spirits described
775 above, which lead an independent existence, a second class of supernatural beings is concerned to a certain degree in the affairs of mortal men, namely the ghosts of human beings.

764 When an individual has died the body is dressed in the person's
322 best raiment and ornaments. A coffin is made of wood. Informants agree that the use of a wooden coffin is an ancient custom and that it has not been introduced by missionaries or other outsiders.[1] The coffin is most often made of upaiya wood (unidenti-
[824] fied). Some informants say that upaiya wood is used exclusively for this purpose, and that coffins are made of no other. Others say that any wood or an old korial may be used. In cases where the coffin is made especially for the purpose, that is, when an old korial is not used, it is made of a tree trunk hollowed by the same process used in making a korial or a cassiri barrel. It is provided with a lid of wood, and the inside is lined with fresh leaves. A grave three to four feet deep is dug in the floor of the house occupied by
764 the deceased (grave: munano). Burial takes place usually within twenty-four hours after death, although in some cases it is postponed until the second day. In former times, it is said, the sur-

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[1] Two negro prospectors who died during my stay in the area were buried in shallow graves without coffins.

viving members of the family would sing and dance at the grave during the entire night after the burial, but there seem to be few observances of this kind nowadays. The only earthly possessions buried with the deceased are clothing and bodily ornaments. Bows, arrows, pottery, and so forth, are not buried with the dead, but are distributed among the relatives, sons taking precedence. 764

The house of the deceased, in the floor of which the grave has been made, is deserted within two to three weeks following burial. The immediate clearing in which the house is located is also usually deserted. However, if the house is located in the midst of a cassava field, there is no restriction preventing the relatives from returning to gather cassava when needed. 768

The mourners, including all the relatives of the deceased who are present, weep to show their grief. The chief mourner (the spouse or closest relative of the dead) refrains from work "until the sad thoughts pass away." The mourners, however, do not mutilate themselves, smear themselves with ashes or other unusual substances, don a special costume, nor assume other formal marks of mourning. 765

A fire is kept burning in the house for a moon after the burial, so that the ghost of the dead, lurking about the grave, will be provided with warmth at night. Food is also regularly left in the house for the ghost. Food offerings of this sort are frequently discovered to have completely disappeared the next morning when the mourners visit the grave. Actually, the disappearance is doubtless due to the depredations of insects and animals, but it is regarded by the natives as a sign that the ghost has been hungry and made a good meal. Strictly speaking, food and fire are supposed to be kept in the house until it falls down, because theoretically the ghost lives in its former dwelling until it is no longer habitable. But in actual practice, it is said that the attentions to the grave seldom continue for more than a month or so. The social [152] motivations for grave offerings and for display of grief on the part of the chief mourner seem to be at least as strong as the religious. If a man, for instance, fails to follow the observances of mourning for a deceased wife, the latter's relatives will be angry with him and will accuse him of having killed her.

If it is believed that the deceased has met death at the hands of kanaimas, precautions are taken, as described in our section on

765 Crime and Punishment, to prevent the kanaimas from drinking the fluids of decay from the corpse.

775 The Caribs have very vague ideas as to the eventual fate of the ghost. They believe, however, that for some time after it haunts the place of its death. Ghosts here, as among ourselves, are believed to be invisible under ordinary circumstances, although there are occasional individuals who, when passing near a house of death, claim to have seen the form of the dead person working about the house as in life. It is because of the fact that the ghost continues to inhabit the house which it used during life that the survivors desert the house and clearing. The general attitude assumes that mortals have sufficient troubles in this life without being annoyed by the attentions of ghosts, which, it is said, often become irritated at the necessity of sharing a dwelling with the living. Especially if a living person unwittingly does something to displease a ghost, the latter will persecute him, even pursuing him to his new dwelling. Living persons often complain that ghosts are tickling them, pinching them, or causing other uncomfortable sensations. These persecutions most often occur at night, and to an outsider it appears that many an ant or flea bite has been mistaken by a superstitious Carib for a ghostly pinching. Of course, it is believed that ghosts are always invisible when making mortals uncomfortable.

775 Although a ghost will become irritated with a living person if
484 the latter stays in his house, it is permissible for a weary traveller to pass the night in a deserted dwelling in case of necessity, provided the intruder speaks to the ghost and explains why he is trespassing. The intruder repeats the following phrase. "Amaronye yedome wawnekusewa." While a human being may thus speak to a ghost, the latter never answers. Several informants spoke of having spent the night in deserted houses and being kept awake by the ghostly footsteps of the deceased owner, who insisted on moving about all night long. It is also dangerous to speak of a dead person, his appearance, personality, or former activities, for fear of arousing the displeasure of the ghost. Likewise, interference of any kind with the house or clearing in which it lives arouses the ire of a ghost.

775 Naturally, no mortal wishes to have any more dealings with ghosts than are necessary. It is said that sometimes thorns are

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put in the feet of a corpse to prevent its ghost from walking. Another method is to cover the face of the corpse with brush, which itches badly and also prevents the ghost from seeing. If one is continually troubled by visitations of a ghost, he may burn a certain moss (piemanotu), which looks like long black hair, and cover his face with ashes. Thus disguised, one is unrecognizable to ghosts, although the disguise, if long continued, is inconvenient and uncomfortable.

Some of the informants say that the ghosts do not eat regularly, that they eat only what is provided for them by mortals. Others say that after a certain period they do not require food. That there is considerable uncertainty concerning the alimentary requirements of the ghosts seems to show that informants had not given the subject much thought previously, and that the beliefs are not highly elaborated. Certain it is, however, that protracted offerings of food to ghosts are not made by the living, although logically it would seem that some such mollification would protect the living from some of the persecutions of which they complain. In fact, however, much of the irritability of ghosts is laid to causes over which mortals have no control, for it is believed that the personality lives on after death. That is to say, that an irascible individual will be represented after death by an irascible ghost, whereas an amiable person will continue after death as an amiable ghost.

The larger activities of ghosts are also a matter of some uncertainty. What do they do beside their daily task of housekeeping and punishment of trespassers? Some informants had no idea; others affirmed that the ghosts busy themselves by keeping in touch with the affairs of men. One informant, for instance, expects to be able to keep advised of the activities of his relatives after his death. If his daughter is married after his death, he will know about it; but he will be unable to interfere if the marriage displeases him.

Carib ideas concerning the after life have not been carried to any logical conclusion. The ultimate disposition or location of the ghost has not been thought out. It is certain that there is no conception of a general place of meeting for all ghosts. No one expects after his own death to meet those who have died previously. There is no heaven, no happy hunting ground — nothing.

775 And when questioned the Caribs reply with answers which show that the idea has never occurred to them, nor do they consider it a matter of any importance. Intercourse between ghosts and humans is seen to be entirely negative from the human point of view; the ghost minds its own business and contacts mortals only when they intrude upon its privacy. It keeps in touch with the affairs of mortals, but exerts no positive influence over them, either on its own initiative or on appeal from living persons. It haunts its last mortal abode and the minds of the survivors, but as time goes on its house tumbles down and its clearing is obliterated by the forest, while during the same time its memory gradually fades from the minds of mortals, until, both processes being complete, the luckless ghost disappears into limbo.

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185 The dead thus play a relatively small part in Carib life. A living man can look forward to no immortality after death, he can neither lead an independent existence in some spiritual paradise, nor does he live on as an individual in the minds or culture of his descendents. The dead are quickly and decisively cut off from the life of their community, and there is a distinct feeling among the living that traffic with them is definitely not desired. The practice of abandoning the place of death (erasing from the consciousness of the living the locality which would serve to keep green the memory of the departed) and the tabu upon speaking of the dead are mechanisms highly adapted to the purpose of eliminating the dead from the social life of the group. I believe that the whole complex of attitudes concerning the dead which we have described is an important factor in explaining the looseness of the Carib culture. At least it is consistent with the individualism which is so strong a feature of the culture. On the one hand, there is no motivation for continuing the ideals of outstanding persons, for there is no day of reckoning when those now living will meet the ancestors face to face for an accounting, nor are the forerunners able to interfere in any positive way with the social life of the living! Thus the group is bound in no way to a set of traditions, ideals, or formulae evolved by its forerunners; it has no responsibility to the latter to continue what they have done. And, as has been pointed out, the stage is set for forgetting as soon as possible the works of the ancestors. On the other hand, a mortal man has only this life to lead. Quite apart from ethical considerations,

such a belief is certainly favorable to the development of individualism; it means that what there is to get must be had during life, an acquisition for which each individual must rely on his own abilities; it means that there are no motivations, other than worldly and personal ones, for a man to submerge himself in the life of the group. 185 761

It is admissible, of course, that the attitudes concerning the future life are a projection of the loose organization of mortal social life. We are not prepared to deal at this point with the development of Carib attitudes, but it does seem to be indicated that the practices and beliefs about death have a considerable effect, which we have attempted to indicate, on social life as it now functions.

The Piaiyen or Priest. The piaiyen[1] is the priest of the Carib religion, his functions being known as piai, (Plates 11, *b*, and 25, *b*), a field including the subjects which in our own terminology would be designated as religion and medicine. For the Carib, however, medicine is merely one branch of religion. It is only the piaiyen who, because of knowledge and techniques acquired in the course of training and experience, can establish direct contact with the more important supernatural beings and forces. A second professional dealer in the supernatural is the aremi emu, whose activities, to be described later, are concerned with magic as distinguished from religion. 791 771

The piaiyen's functions are (1) to serve as a repository of and authority on religious lore and practise, (2) to train young piaiyen, (3) to contact the powers and beings of the supernatural world in the interests of the community and of individuals. In the course of his duties, the piaiyen uses a rattle or maraka in which are contained a number of pebbles, or tarikano, each representing a spirit with which the priest is on intimate terms. The more serious of his 791

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[1] Piaiyen is both the singular and plural form of the word for "priest" or "medicine man" among the Barama Caribs. Roth discusses the variations of this term. "The Créole term for priest-doctor is *piai*-man, a hybrid that seems to have been first recorded by Waterton in the form of *pee-ay*-man. . . In its simple form, the word of course came into use much earlier, and is seemingly derived from the Carib *piache*, which Gumilla employs, and is still met with among the Pomeroon group of these Indians as *piésan*. Brett derives it from the Carib word *puiai*, which denotes their profession. The Akawais call it *piatsan*. Dance seems to derive the name from that of the tribal hero, Pia. Crévaux in Cayenne speaks of *piay*, de Goeje in Surinam of *piai*, and Bates, throughout the extent of the Amazon visited by him, of *pajé*. The Warrau word for the priest-doctor is *wishidatu* ("talky-talky" for witch-doctor?) . . . The Caribs of the lower Caroni River speak of these men as *Marirri*, and the Island Caribs as *Boyé*. The Arawak designation is *Semi-tchichi* or *Semi-cihi*, the same term applied generally to the kickshaws and various apparatus employed in the pursuit of the craft." Roth, 1915, *Animism and Folk Lore*, p. 328.

791 rituals are carried on inside a small hut, or consultation room, called the toakai, and in them he uses tobacco in the form of smoke and in the form of an infusion, alcoholic drinks, and certain herbs.

Following is an account, given me by David, the piaiyen of Sawari, of the origin of piai and of how David himself learned the technique.

773 791 Komanakoto was the first piaiyen. One day he was at the river side and heard a mysterious singing. At first unable to decide the origin of it, he finally decided that it came from under the water, so he dived down into the river. At the bottom he found a number of beautiful spirit women singing magical songs. They welcomed him and taught him the songs. After three days he came up and told the people of his settlement of the strange thing which had happened to him. They were naturally somewhat incredulous, so he went to the river again and descended to the bottom for three days. At the end of that time he reappeared, bringing with him not only the songs and the mysteries of the piai, but also the tangible equipment: tobacco, maraka with handle and stones, and arrow stick (from which handles are made). Thereafter he taught other men the piai, and that is how piai first came to the Caribs.

Three other young men learned from David's teacher at the same time as he did. A small house was built, with walls made of palm leaves so tightly plaited that the interior was entirely dark. On the first day of the initiation all the candidates assembled in the house with their hammocks. The teacher took a large amount of green tobacco and pounded it up so that it made quite a little heap in the center of the house. Taking some of this, he put it in a large earthenware bowl and filled the bowl with water. After letting it "set" for a time, he strained off the tobacco water and threw away the leaves. Then each of the candidates was given a large calabash of tobacco water to drink and a cigarette to smoke. Having already supplied themselves with gourds, and arrow sticks from which to make the handles of the rattles, they were now shown by the teacher how to make the maraka. As soon as the tobacco juice began to take effect and their heads "were going round," the teacher gave them each two small pieces of black stone to put inside the maraka. These stones contained the spirit of Piyumari, the land spirit, and that of his wife.

791 787 After imbibing the tobacco juice David lay down in a swoon.

He went to a place he had never seen before (in hallucination), a 791 place where beautiful women sang to him songs which he had 787 never heard before. This was the place of the spirits, but so queer it was that while there, one had merely to turn his head to see behind him the initiation room and all the familiar faces he had just left. The women approached him, took away the cigarette he was smoking and gave him one of their own making, and gave him their tobacco juice to drink. And all the while they were singing songs. After a time he felt the teacher blowing tobacco smoke on the crown of his head, and he and all the other neophytes returned to themselves. They were sick and vomited, but each one, if he had luck, had brought back from the spirit world a song taught him by one of the spirits in that land of dreams. And each knew that when he sang that song in the future the spirit which had given it would come to him and aid him.

Once again they smoked and drank tobacco water. Then the teacher formed them in a line, and they danced in a circle to the left around the fire, which was in the center of the floor. They kept time by rattling their marakas in their right hands, and, because they were weak, supported themselves with arrow sticks in their left hands as they danced. And as they danced those beat drums who could, and others played violins, and each sang the songs which had been taught him by the spirits. During all this the teacher from time to time squeezed pepper water in their eyes. Then they drank some more tobacco water, and after doing so fell down in a swoon, growling like tigers. And David saw a huge tiger come to him and smell. David smelled the tiger and knew that this was his own particular tiger spirit who would come to him in the future when he drank tobacco water. David felt himself turn into a tiger, and he prowled about the floor on all fours, growling. After a time, however, he felt the teacher blowing tobacco smoke on his head. Waking up, he was given more tobacco juice to drink. Everyone vomited and then they lay down in their hammocks to sleep a short while.

Early in the morning the teacher wakened them. The other people of the settlement had collected a quantity of firewood and had built a large bonfire in the middle of a trail which they had cleared in the thick bush, near the place where the houses stood. The neophytes were told that they must pass through this fire.

791 First the teacher started acting like a tiger, growling and going
787 on all fours, with his fingers clenched up under the palms of his hands in the way a tiger holds his claws. In this manner he passed through the fire and was followed by all the neophytes, who passed through the fire and turned about and returned through it. The flames licked them, and some came out with their skins blazing.

791 After this ordeal they returned to the initiation hut where they imbibed more tobacco water. Then the teacher said they must go to the creek and bathe. So in a single file, supporting themselves with their arrow sticks, they went to the bathing place. While they bathed, the women of the settlement threw mud on them and made fun of them. They were told to throw mud at the women, but they were too weak to do this effectively. They were instructed to try to catch anything they could find in the water, such as fish or worms. Any neophyte who succeeded in this would have additional power over the spirits of the water. Everyone then returned to the settlement, where drink was ready and preparations had been made for a spree. The neophytes, however, returned to their hut, where the teacher gave each of them a large calabash of cassiri in which big black ants (yoku) had been put. After drinking this, they had a calabash of sweet cassiri "to cool them down." The rest of the people were making sport by this time, in which the neophytes were free to join, although they were so weak that they could not do so very energetically. The initiation was now complete.

For three months following the initiation they were subject to the following restrictions: no sleeping with women; no eating of fish or meat; they were warned against allowing smoke or flames to touch them; they were warned against getting into the steam which comes off a cooking pot. All these things were believed to offend the spirits which had come to live with the new piaiyen.

If, during this time, a man needed meat, it had to be taken in the following manner: it was cut up in small pieces and roasted over the fire on the end of a stick, so that the piaiyen did not get into the smoke. The meat was then wrapped in a tobacco leaf and swallowed as a pill. If the pill stuck in the throat during the act of swallowing, it was apparent to the piaiyen that the spirit did not want it. The procedure could, however, be repeated until

the pill went down, showing that the spirit had signified that he 791
had become accustomed to it.

At the end of three months the neophytes again gathered and the teacher squeezed tobacco juice into their eyes for the last time, and they were considered ready to practice.

During the period of probation following the initiation just 791
described, the neophyte keeps in touch with his teacher, who in- 789
structs him in many matters, including the knowledge of herbs, the ways of the spirits, and the technique of shooting stones into other individuals. The latter process is used theoretically as a means of self protection and retaliation by the medicine man. The technique and philosophy of "shooting" is fully described in our section on Crime and Punishment. A piaiyen never is supposed to shoot a spirit stone into an individual merely from mischief or because he has been hired to do so by some layman. However, medicine men are capricious and often take offense at some wrong which they fancy that an individual has committed against them. Consequently, many ills and pains suffered by laymen are attributed to attacks of this kind of piaiyen. The method whereby the shooting of spirit stones is taught is as follows. The neophyte must practice under the supervision of his teacher with a small arrow made of the central rib of the kokerite leaf and a small bow of yarri-yarri. A small cotton ball, about one and one-half inches in diameter, which serves as the target, is suspended from one of the cross pieces of the house by a piece of string. While the novice shoots at this target with the bow and arrow the teacher tickles him in the ribs from behind. The novice must prove his marksmanship in this way before he is able to shoot spirit stones. If he acquires enough proficiency so that the cotton ball stops dead when he hits it with the arrow, he will be able to kill when shooting with spirit stones; if, in his most successful attempts, the ball and arrow turn around a number of times after a hit is made, his future victims will recover in as many days. Next the teacher places a spirit stone in the novice's mouth and draws it from the mouth through the shoulder and through the arm three times, in order to make the tube in the arm through which the shooting is done. The fourth time the stone is drawn through the arm it lodges above the elbow joint.

In regard to obtaining control over spirits, the following instruc-

791 tion is given. The teacher makes a long cigarette of tobacco wrapped
789 in kakarelli bark and tosses it to the novice. If the latter is able to catch the cigarette between the second and third fingers (where the "muzzle" of the shooting tube is located), it is a sign that as time goes on he will be able to get into communication with any spirit at all. Also in this connection, the teacher will frequently send a spirit stone to the novice during the night. The novice must see it coming and catch it.

796 To make a good cassava crop, the piaiyen of the settlement calls
787 the spirit of the field, Piuku. First a toakai, or consulting room, is constructed of manicol palm (Plate 25, *a*). A goblet of cassiri, which must be made by a preadolescent girl, is given to the priest, and he enters the toakai while the population of the settlement gathers outside. Inside the hut, the piaiyen places the goblet in the middle of the floor and then drinks an infusion of green tobacco leaves in water, a potion which is imbibed by the piaiyen at the start of most of his religious and healing rituals. The tobacco water causes the practitioner to "speak with the spirits," that is, to have visions or hallucinations. The medicine man, squatting on the side of the hut opposite the door, then sings a chant to the Piuku, asking him to come and partake of the offering provided by the people. In this ceremony the piaiyen uses no rattle, because Piuku is not included among those spirits which are represented by spirit stones. Neither is tobacco smoke used. When the spirit arrives in the hut his presence is made known to the people outside by a low humming noise, the voice of the spirit. Thereupon all the people outside the hut speak to him individually (without formula), asking him for a good crop of cassava and imploring him to drink of the cassiri. The Piuku answers with his characteristic low humming noise, which all can hear but only the piaiyen can understand. Then there is the sound of drinking, and shortly afterwards the piaiyen emerges from the hut holding the goblet in his hand for the inspection of the populace. The contents of the goblet are clear like water and are icy cold, indicating that Piuku has drunk the essence of the brew. Then the piaiyen goes back into the hut and sings a song, thanking the spirit and telling him now to go back to the field, from which he has come for the occasion. After this the piaiyen emerges from the hut a second time and informs the people as to whether the spirit's answer to their

pleas was favorable or unfavorable, in other words, whether there 796
will be a good or a poor crop that year. It is said that the prog- 787
nostications of the piaiyen are remarkably accurate. Following
this ceremony a drinking spree takes place.

The precise songs which are sung in this and other ceremonies 533
I was unable to obtain because it was impossible to find a piaiyen 787
who spoke English of any description. Using laymen as inter- 791
preters, I was blocked because of the secrecy which guards the proprietory interest which a piaiyen has in his incantations. It was claimed by all piaiyen, however, that the songs which each practitioner uses are peculiar to him alone. As he becomes established he invents songs and incantations of his own, or has them revealed to him by the spirits while he is in a trance induced by tobacco. By the process of trial and error, those songs which are efficacious in calling the spirits are retained in the individual piaiyen's repertoire. Medicine men say that when they wish to learn more about the spirits, to establish contact with spirits which are strangers to them, they retire to their consultation rooms or palmleaf huts, drink the usual infusion of tobacco water, smoke a cigarette, and soon the spirits may come and talk to them. During the hallucination they will discover themselves singing songs which they must remember to use on subsequent occasions when they wish to consult the spirits in question.

Contrary to the usages of medicine men in certain other Guiana 778
tribes,[1] the piaiyen of the Barama do not use dolls or elaborately 791
carved benches in the practice of their art.[2] Each piaiyen does use a bench, which is reserved for ceremonial purposes in the exercise of his duties, but these benches, which I have seen in use by the piaiyen at religious observances, belong to the general type used by laymen as pieces of house furniture. If my information is correct, the rattle, with its enclosed spirit stones, tobacco, herbs, and a bench are the sole ceremonial accessories used by medicine men.

In addition to the cassava ceremony, the piaiyen conducts a 796
ceremony, the details of which I was unable to learn, at times when 796

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[1] Roth, 1915, *Animism and Folk Lore*, p. 329.

[2] After a month of close relationship with David, the medicine man of Sawari, I was unable to break down his "story" to this effect. Finally remaining unconvinced, I resorted to the slightly unethical expedient of opening, in his absence, the basket where he stored his paraphernalia. Here was found his rattle with enclosed stones, tobacco, a number of dried leaves (presumably herbs used in curing), but no manikin or doll.

796 fishing is difficult. It is said that this ceremony also consists of
791 calling a spirit and making a sacrifice. Hunting difficulties are
ameliorated by the piaiyen on an individual basis by curing bina
trouble, which will be described shortly.

757 **Medicine.** Beside the cassava and fish ceremony it is said that the medicine man conducts no public ceremonials, the remainder of his activities being confined to services which he renders on request and payment by individuals. In the latter capacity he fulfills functions analogous to those of a physician. Among the matters in which his services are sought are prevention of infertility, prevention of conception, and curing of the following ailments: fever, headache, sores and ulcers, eye trouble, and, in some cases, stomach and respiratory troubles. All internal and organic complaints, however, are difficult for the piaiyen to treat. The piaiyen also acts as a diviner in cases where sickness is due to action by another piaiyen. (See section on Crime and Punishment.)

753 Practically all sickness, including reproductive maladjustment, is due to intervention by spirits. But only serious cases of illness are cured by medicine men. A large number of medicines concocted from materials in the bush are in use by laymen for self-treatment. There are also a number of older women who are noted for their knowledge of curing methods and who constitute a group of minor healers, who are consulted by laymen, usually before or, sometimes, coincidentally with treatment by a piaiyen. The use of material medicines is not inconsistent in Carib thought with the theory that disease is due to spiritual causes. It is believed that the application of medicine to a wound, for instance, is so unpleasant to the spirit which has caused the wound that it ceases its interference. The use of internal medicine acts in the same way, causing the interfering spirits to cease persecuting the patient. Cathartic pills and salts, for instance, are believed to loosen the grip which spirits have taken on the bowels. A partial list of native material substances and cures used in Carib lay-medicine follows.

757 *ara uri*, remedy for headache. Scrape bark, then wrap the bark in
278 any kind of leaf and soak it in water four to five days; then wash
the entire head, including the hair, with the solution.

parawakasi (trysle, *Pentaclethra*), remedy for open cuts and sores; a dicotoledenous plant. The two halves of the old seed remain

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attached to the stem at the ground level of the young plant. These are scraped and the juice applied to the wound. Large plants are also used for their bark, which is scraped with a knife on the inner surface; the mash so obtained is squeezed onto ulcers and makes them heal.

saridori, remedy for intestinal worms. Leaf is boiled and the infusion drunk. Acts as cathartic.

warampyu mi'idi, for burns. Scrape the juice from the bark and put it on burns and scalds.

akorurari, leaf which is placed over all open sores and wounds to heal them. Applied like adhesive plaster. (cf.rede epityo.)

atupuran (kotopuran), leaf which is squeezed and pounded and forced into a deep bleeding cut. It makes the blood coagulate.

arawata andukuru (baboon tail). Cut bark, scrape inside bark, and apply to abscess to draw out inflamation.

kuraru. Take bark, scrape it, and shove the mash into the cavity of an aching tooth. Alec uses Capstan tobacco for the same purpose.

arawuni. The leaf is rubbed between the hands, and juice dropped in the eyes as a cure for sore eyes. Any kind of pepper leaf is also said to be efficacious for this purpose; the juice is put in the eyes.

akuri andopidi (accouri tail), small red vine. It burns the skin, and when used to tickle the nose, causes sneezing. It is used for head colds to "make the cold come out."

tobacco leaf. This is heated green over the fire, and the juice squeezed into the eye for headache and neuralgia. The treatment causes heavy flow of tears, smarting, and sneezing, but is said to draw the pain out of the head.

pakamu maituru (bitter tale), a vine leaf which is used to cause sweating. It is boiled and put under your hammock so that the steam rises up while you lie there wrapped in a blanket.

quinine bush. This is boiled and mixed with lime juice, and taken as an infusion. Alec once had fever for five days. Quinine bush was administered and the fever disappeared.

tumuka, a little bush which grows in old fields. It is boiled and taken as an infusion for stomach trouble. It acts as a cathartic.

koyuyaru, a green bush. The leaf is mascerated and put as a mash on a festering sore.

278 *rede epityo*, a bush: boiled in water which is used to wash the wound;
757 the leaf is put over the entire wound like a piece of court plaster.

kotupuron, bleeding. If you have an ache or pain in the arm, you make a shallow cut in the arm. It makes no difference which arm. Then you rub some of the leaf, called kotupurong, into the cut. As this cut heals, so will the trouble in the whole arm better itself.

anakoko, a plant having berries which are red on one side and black on the other. The bark of this plant is pounded and put in a pot with water. Stones are then heated and thrown into the water, and the whole thing is placed under the hammock of the sick person so that the steam rises around him.

kumishako, a worm which lives in the creeks, is used as a cure for snake bite. The worm is cut in half. The patient eats one half and rubs the other on the wound.

waiampata, leaf boiled to make tea, said to relieve stomachache.

otokau, juice taken from stem to make a drink "black man's tea," refreshing.

areku. Sap of the inner bark is made into an infusion used to wash the skin of children suffering from eruptions.

konosa. An infusion is made from the leaf and taken internally for stomach ache.

haisaiyundi. The root is boiled, and the infusion taken internally as a treatment for cough. The raw stem is also chewed as a remedy for cough.

akoyubori. The onion-like root is mascerated and applied as a poultice to inflammations.

tiger teeth and hog teeth, as a cure for snake bite. The teeth are burned, and the ashes are mixed with water. Part of this mixture is imbibed and the rest rubbed on the wound.

snake eyes, as cure for snake bite. The eyes are pounded up and rubbed on the wound. This method of curing snake bite is regarded as first aid and is resorted to only if other methods are not available.

warakabra feathers, as cure for broken arm. Alec tells about Harrison, deceased, who had a compound fracture of the forearm. His mother put some kind of bark on it and burned warakabra feathers, which were tied on over the fracture. These warakabra feathers, are good for all fractures; their efficacy is connected with the fact that it is extremely difficult to break the 278 bones of one of these birds. Unburned warakabra feathers are 757 also put on sprains. A wound or a fracture heals very quickly in the warakabra bird.

milk of the swizzle stick bush (ukuyapo aru epukuru). This is put in the eyes if white matter is being discharged from them.

slate or shells, pulverized and mixed with water, are used for sore eyes. The solution is dropped into the eye. This is not universal.

river oyster or periwinkle. The water inside the shell of the mollusc is sometimes squeezed into the ear for earache. This custom is not, however universal.

Less beneficial than the foregoing remedies is the Carib practice of immersing oneself in cold river or creek water if one is suffering from fever.

If medicinal treatment alone is not sufficient to disperse the 755 spirits which are causing the illness of a patient, the piaiyen is consulted, on the understanding that he will be recompensed according to the manner which he will specify. The first task of the consultant is to determine which spirits are causing the trouble. To this end he retires into his toakai, drinks tobacco water, smokes tobacco cigarettes, and thus induces a trance which results in communication with the spirits with whom he is in contact, a communication which is accompanied by song and the shaking of the maraka. He questions them one by one to see if any one of them is concerned with the case. If so, he asks it to desist. If not, he asks if they know which spirit is responsible, and upon discovering the responsible spirit tries to establish communication with it so that he can persuade it to desist. Once he has discovered which spirit is causing the trouble, he repairs to the side of the patient with a bowl of cassiri, which is administered to the sufferer. Then he takes up a watch over the patient, which is punctuated by songs imploring the spirit in the case to leave the patient alone and reciting to the spirit the fact that the patient has never wilfully committed an offense against it. All medicine men stoutly maintain that they use no medicinal constituents in the drink which is administered to the patient, but most laymen, on the contrary, believe that they mix with the drink certain medicines which may have a beneficial effect. Failure to cure an illness is laid by the practitioner to the intractability of the spirit

755 or spirits who are causing it; such failure is also often attributed by laymen, who in this tribe seem to be singularly realistic within the bounds of their philosophy, to the ineptitude of the piaiyen in establishing contact with the proper spirit.

846 **Couvade.** It is apparent that a Carib is surrounded by spiritual beings and forces on all sides, and in one way or another must be careful not to irritate them. The couvade is a case in point. For a week following his wife's accouchement, a Carib husband is required to stay about his house and not go into the bush. The theory is that the smell of the new-born infant clings to him for that length of time and announces the birth to akatombo, the evil spirits living in the bush, who take delight in causing the child to sicken. The father is not, however, required to stay in his hammock, although a man forced to stay in the house will usually be found in the hammock because that is the most comfortable place for him to rest. Neither does the Carib father simulate the pangs of childbirth. I suggest that reports given by travellers of certain tropical South American tribes, that the couvade requires that a father behave in the manner of a woman in childbirth, may have been based on just such evidence as that offered here: the father may have been observed in his hammock following the birth of the child, and it may have been assumed in some cases that he was undergoing a vicarious lying-in, whereas the actual facts were orientated to an entirely different ideology.

778 **Binas and Magical Practices in Hunting.** "Binas," according to Roth,[1] "are charms, plant, or animal, which effect their purpose by attracting the particular object or desire yearned for, whatever it may be — from the capture of an animal to the gratification of a wish. The real source of the term *bina* is from the Arawak *bia-bina*, meaning to 'entice, attract', etc." The Barama Carib word is turarari (Roth renders it turallari). When we come to the subject of binas, we are on the border line between religion and magic. Binas are strictly private, they are associated intimately with the law of similarity, and only in abnormal cases are the piaiyen involved in their use.

In Myth 3 (q. v.) we have a tale accounting for the origin of plant binas from the carcass of a huge snake, which agrees to a certain extent with the original tale given by Roth.[2] Even at the

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[1] Roth, 1915, *Animism and Folk Lore*, p. 281.

[2] Roth, 1915, *Animism and Folk Lore*, p. 283.

present time it is said that plant binas spring up from the ground 778
where a large boa-constrictor has died. It is my view that this is a natural occurrence due to the fertilization of the soil offered by the decay of a large amount of organic matter. A rank growth of leafy plants is often seen to cover the spot where a carcass has lain a few weeks before. A thirty-foot camudi or boa-constrictor (not an unusual size for these snakes) is the largest animal body in the region, and naturally upon its death affords a fertile spot for the growth of wild plants, including those which may be used as binas.

Let us first consider the binas which are used to assist the hunter. 778
These are of two major types, animal and vegetable. 224

The krapo (a certain kind of tree frog) bina is the best of all 825
the binas, whether made from animal or vegetable. It is used by practically all members of the tribe and acquired shortly after a man is old enough to hunt. This frog imitates by its call several game animals in the bush, and the use of it, contrary to most bina substances, which are confined to one type of game, is considered to be generally efficacious in hunting all types of game. To prepare such a hunting charm, a man first captures a krapo. Then he makes a series of short parallel cuts on the inner side of the arm which is used to draw the bow string. The cuts run transversely across the branchio-radialis muscle. The hunter rubs some of the slime from the skin of the frog into these incisions, talking to the dead frog during the process and asking it for help in hunting. Next he takes the krapo home and chars it over a fire, after which he pulverizes the remains and puts the ashes away in a packet to be kept until the cuts on his arm start to heal. When the cuts have started to heal but are not yet closed, he rubs the ashes into the wounds, speaking an invocation which he composes himself. A typical phrase of invocation is, "tuamokau poriano ihi apameto paporo tonoyamo akara mako iwato" ("You must make me as you are. Let me hunt all kinds of meat. You must give me those things.") After the ashes have been rubbed into the arm, the
user of the bina must remain in his house for three days. During [784]
this time he can eat only very thin cassava cakes and a little cassiri water with two very small peppers. If he eats meat during this time he will be unable to sight game when he goes hunting. Also at this period he must remain continent. Breaking of these

778 224 825 tabus results in the failure of the bina to produce the desired results. On the fourth day the man goes into the bush, but merely looks for game and does not shoot anything. If during this stroll in the bush the man sees much game, he shoots a dukwaru bird (regarded as very hard to see in the forest), takes it to the nearest creek, crushes it, and washes his entire body, using the crushed meat of the dukwaru as he would use soap. Then he fishes until he catches a small silver-colored fish called muroko, and on the river bank crushes it and again washes himself, using the mascerated body of the fish as he would use soap. It seems that the dukwaru and the muroko are considered to be the first fruits of the bina power. If these provisions are carried out faithfully, good luck will attend the efforts of the huntsman.

In addition to the krapo, the aruko worm is used as a bina. It is a tree worm of the centipede type, about four inches long, as big around as a man's finger, and is especially distinguished by the red and white marking which encircles the body. The red marking is apparently the explanation of the choice of this worm as a bina, as in the invocations which accompany its use, the worm is asked to give the hunter power to streak with red the bodies of the animals which he hunts, in the way in which the worm is colored, presumably referring to the blood which the hunter hopes to draw from his quarry. A man finds one of these worms in a tree, dislodges it with a stick, and takes it home wrapped in a leaf. In his house he chars it over the fire and makes it into a black powder, which is then rubbed into cuts in the arm, in the manner followed with the krapo bina. No slime or liquid from the worm is rubbed into the incisions, however, as was the case with the frog. The period of tabu following the completion of the bina is only one day in this case.

As far as I was able to discover, the krapo and the aruko worm are the only members of the animal kingdom used in making binas.

778 824 A large number of plants are used as binas. I have made no attempt to exhaust the lists of plants used for this purpose.

224 All plant binas are used as charms to assist the hunter in securing definite types of game; that is, each bina is efficacious only in the hunting of a certain species, and is chosen because of a resemblance, fancied or real, between some part of the plant and some

part of an animal in question. Practically all of the plants used 778
have non-woody stems and large leaves. The use of these binas 824
is secret, it being believed that discovery destroys the effect and 224
sometimes causes serious consequences. A considerable element of trial and error is present in the choice of plant binas. A man hunting in the bush will notice a plant of which the leaf, for instance, resembles the hoofs of the red deer. He will dig up the plant with his cutlass and carry it home, where it is not likely to be seen or touched by other persons. Whenever he goes out to hunt he repairs without being observed to the spot where the plant is growing, picks a leaf, crushes it, and rubs it vigorously over the scars of his krapo bina. Burning or drying the leaf before using, contrary to the condition of animal binas, diminishes the power of a plant bina more quickly. While applying the bina to his arm the man recites an invocation something like this: "ikalimako-moko-tuturarari-iwa" (lit: "you give him — you are bina") In some cases it is the root which is used, again it is the stem. In any case, the part of the plant which bears the alleged resemblance to the animal desired is used for bina purposes. If the use of a certain plant does not bring the desired results, it is discarded, while plants whose use is attended with good luck may be used for years. Most men have a collection of plants, each of which is efficacious for procuring one kind of game or fish. And a man usually uses several binas before starting on a hunting expedition, so that he will be prepared to deal with as many kinds of game as possible.

Associated with binas are a number of tabus. When using one [784]
of these charms on hunting expeditions the proprietor of the bina 224
must always be careful to sling his hammock up over a beam of a 778
house, where it cannot be touched accidentally by anyone in his absence. If any other touches the hammock, the bina will be useless in hunting. Furthermore, a man while using a given bina plant, that is, while he has it in his field, must not sell his bow and arrow or gun, although others may borrow them. These restrictions are important, the theory being that when a man uses a bina he becomes associated in a sort of partnership relationship
with the supernatural power represented by the bina. This power 224
becomes joint owner of the man's hammock and hunting weapons. 778
There is a difference of opinion as to just what the power is which 771

778 224 771 the bina represents, but it is agreed that in some way it is associated with the species of game in question. We have already seen that each animal has an individual spirit of its own. The bina power is not associated with individual animal spirits, nor have the natives formulated their ideas concerning it sufficiently to conceive of it consciously as a spirit representing the entire species. Nevertheless, it seems that the underlying notion is that the bina plant or animal participates in the spiritual power which pervades the whole species or group of species for which it is efficacious. Informants say that because the bina has something in common with an animal it "must have the same spirit that all animals like it have." By rubbing the bina into himself through incisions in the skin, a man partakes of the power himself, or becomes associated with the spirit And the power or spirit is personalized sufficiently to take an interest in certain of a man's belongings, an interest which is sometimes rendered in pidgin English as "ownership." Some informants say that the bina spirit actually assumes ownership in the hammock and hunting weapons. Others say that the spirit merely accompanies the hunter into the bush and helps him to find and kill game. All agree, however, that the krapo bina spirit assumes joint ownership in the hammock, hunting weapons, and, in addition, the bench, which must be hidden during the owner's absence so that other persons will not use it. The spirit resents the use of hammock or bench and the sale of weapons by persons with whom it is not associated. Asked to explain the somewhat traitorous behaviour of these spirits which, while pervading animal species, betray the species to human beings, informants uniformly replied so incoherently as to indicate that the problem had never been brought to their attention. There is thus considerable confusion concerning the precise identification of the bina spirits, a confusion which, I think we may safely say, exists as strongly in the minds of the Caribs themselves as in those of the readers of this section.

778 784 Serious consequences may attend the spoilation of a bina as a result of the breaking of one of the tabus mentioned above. If a krapo bina spoils, its proprietor becomes partially or totally blind. In regard to this particular bina, spoilation may also occur if the proprietor allows a child to get its urine on his hammock or on himself. Boils and eruptions most often attend the spoilation of

784 778 a plant bina. Tabus which must be observed with plant binas, in addition to those mentioned above applying to all binas, include secrecy and prevention of the accidental touching or handling of the plant by a woman. (Accidental touching or handling by another man does not result in spoilation.) Binas may be given away or sold, although this is very rarely done on account of the precarious nature of the results. The bina power may object to being thus bandied about and produce boils and other ailments for the discomfort of both the giver and the receiver.

755 778 If a man finds that his bina has spoiled (that is, if he has an ailment which he feels may have been caused by an infringement of a bina tabu), he may be cured by a piaiyen. Alec, my interpreter, for instance, was once cured for a case of this sort which resulted in a skin eruption. "First the piaiyen blew tobacco smoke all over my head and then over my face. He was smoking a cigar of Carib tobacco. He passed the palm of his hand down over my face while he was smoking. He sang. The spirit of the krapo bina came to the piaiyen and told him what was the matter. The piaiyen sang, asking the spirit of the bina to come out of me. The spirit came out, I could not see it, but the piaiyen talked to it as it came out. He only talked and sang to the spirit. He did not suck me or do anything to me except blow tobacco smoke on me, pass his hand over my face, and talk and sing to the spirit. He did this three nights. During three days I could eat no meat. The piaiyen gave me cassava and birds, mostly mamm and powis, but no other kinds of game. I paid the piaiyen with two yards of cloth. I got so I could see better in a few days."

832 A number of love charms are in use. Those of which I know are used only by men, although women also are said to use analogous charms of love. All are roots bearing an alleged resemblance to the male sex organs. One is to be mixed with oil and rubbed on the hair of the suitor. When near the lady he passes his hand through his hair and manages to touch the lady with it. Another is surreptitiously mixed with the damsel's face-paint. A third can be rubbed unmixed on anything which she would be likely to touch. No unfavorable results of a medical nature are to be expected from the clumsy or ill-advised use of these charms, although embarrassment and ridicule follow discovery. Failure of the charm to win the girl's heart is attributed to improper methods

832 of use. Although very good results are reported from the use of certain love charms, only desperately unrequited lovers or individuals with adulterous or home-breaking intentions resort to such extremes. Prolonged coyness or indifference is not a noticeable feature of Carib courtship and before marriage, at least, it is only the extremely unattractive individual who cannot prevail upon the desired one to share a couch occasionally. Sexual communion seems to take the edge off romantic yearning. In short, there is little love of the "moon-calf" variety between Carib young people. A man who wishes to persuade a virtuous wife to leave her husband is the most frequent user of love magic.

754 **Miscellaneous Magical Beliefs and Practices.** The aremi emu, or professional sorcerer, is concerned chiefly in acting as magical agent for individuals who wish either to do harm to another person or to seek revenge. The functions and techniques of this practitioner are described in our chapter on Crime and Punishment because of their close connection with law and order.

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791 It is well to point out here, however, that the methods of the aremi differ from those of the piaiyen in the following respects. (1) The aremi does not use a maraka or rattle, because he is unable to talk with the spirits which are represented by pieces of stone. (2) To induce the psychic state necessary for his art, the aremi drinks an infusion of red peppers, while the piaiyen uses an infusion of green tobacco. (3) The aremi, although able to divine trouble, is unable to talk directly with any of the more powerful spirits as the piaiyen does, but relies almost entirely upon magical practices. On the other hand, both medicine men and sorcerers use tobacco smoke in their practices.

Herewith are mentioned certain magical practices and beliefs which are within the scope of laymen.

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789 The first time a dog is used for hunting, it cannot be allowed to eat the flesh or bones of an animal which it has hunted. If such occurs, the dog will be useless for hunting in the future. It is believed that contact with the animal flesh weakens the dog's powers of hunting. Orupere, a plant called by the name of a giant mythic snake (Myth 3) because the veins in the leaves are red and branch out like the tongues of this supernatural monster, is rubbed on a hunting dog's nose to make his smell keener. It is extremely difficult for any living thing to escape the clutches of

the monster's tongues. On the theory of similarity and contact, 789
the dog's nose absorbs the ability to hunt all things down. 224

Puppies are frequently protected from illness by a string of 789
cotton tied around the right leg just above the point of the astragu- 825
lus. The progress through the body of spirits which may have entered the animal through its feet is cut off by the string around the leg.

The shells of the large river snail, which bear a general resemblance to the globular gourd, are tied to gourd bushes as a means of insuring a good crop.

The snake is believed to live forever, because in changing its skin it becomes young again each year. The same is said to be true of the bush crab, which doffs its shell each year.

The larynx bones of the "howling baboon" (*Mycetes*) are charred, pulverized, mixed with water, and drunk as an infusion as a cure for coughs and throat trouble.

Dreams. If a man dreams of a dead person, he believes that he 828
is actually seeing the ghost of the dead walking by at that moment. 787

If a person dreams of a faraway place, he believes that his spirit is visiting that place while he sleeps. "If I dream of Waini Saw Mill (a hundred miles away), it means that my spirit is out for a walk."

When a living person is seen in a dream, the Caribs have difficulty in explaining why the person in question did not dream that his spirit was at the point mentioned by the first dreamer. One informant was perplexed by the following: "Two times I dreamed the same dream. My brother and I were paddling a korial in the Wori-wori rapids (on the Barama) each time. But my brother did not dream that at all."

It is believed that when a man dreams of intercourse with a specific woman, the representation of her which he sees is merely the disguise assumed by a malevolent snake spirit, and that it is not the actual spirit of the woman in question. Certain female spirits take delight in assuming the forms of living women and appearing to men in dreams. An erotic dream of this sort is highly undesirable, because it is believed that a man will become seriously ill after such a dream unless he immediately confesses it to the other members of the settlement. The spirit which he sees in a dream of this sort will make the dreamer ill and try to kill him so

828 787 that she can have him for herself, but will be frightened away if the man makes a clean breast of the visionary intrigue. Snake-women spirits most commonly appear to men in dreams. If a man continues to dream in this way, the spirit woman will appear to him in the bush and will try to kill him. Prolonged dreaming of this sort can only be cured by a piaiyen. The Caribs, in common [839] with most men, find that erotic dreams accompanying seminal emission practically disappear if a man is having regular intercourse with a woman, and explain this phenomenon on the theory that spirit women are too intelligent to attempt to seduce a man who is well satisfied with his earthly sexual life.

The case is related of a certain man who continued to dream in this way without saying anything about it. Finally the spirit with which he was consorting in his dreams became pregnant and gave birth to a child. Other people heard the baby crying in the bush. Going into the forest they were surprised to see the spirit woman appear to them holding a baby in her arms. The man said nothing, but became violently ill and only when he was dying did he tell the story of his experience and express the belief that the spirit was carrying him away.

These dream women seem to be connected with snakes and with [825] only a particular kind of snake, called timering akoyu, which, marked with red, white, blue, and green coloring, is considered very beautiful.

The figures of one's enemies are wont to appear in nightmares. Even if the enemies are not recognizable, the grotesque and hideous forms seen in nightmares are regarded as disguises of the spirits of persons who are plotting harm to the dreamer. A man who is bothered by repeated nightmares consults a sorcerer to discover what is afoot and thus nip any plots in the bud.

196 **Sex in Inanimate Objects.** Certain objects of material culture are thought of as having sex, according to their form. It cannot be said on the basis of my information that the conception embraces more than a rudimentary idea of animistic identification, nor does it seem that the sex of a given object is connected with the spirit of that object. On the whole, the sexual differentiation of certain objects seems to refer to purely qualitative differences. The form which is considered best is in each case identified with the male sex.

196

1. Houses: steep roofed houses are male. Flatter roofed houses, in which the angle of the roof is more oblique, are female. The flat roofed type does not shed the rain so well and requires more thatch than the steeper roofed variety; consequently it is not so efficient.

2. Benches: the simple type is regarded as female. This type only is found in use on the Barama at present. A more highly elaborated variety is said to have been in use formerly and is regarded as male.

3. Korials: a V-shaped cross sectioned korial is female; a korial U-shaped in cross section is male. The male type is steadier, carries a bigger load, is easier to manage, and is said to travel faster.

MYTHS AND TALES

1. The Origin of Foods

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A long time ago the Caribs were living without knowledge of cultivated plants. With them lived the bush cow, the rat, and the squirrel. The bush cow would every day go across the river and mysteriously disappear in the bush. One day the rat asked to accompany him which, after some hesitation, the bush cow decided to permit. He told the rat to catch hold behind his ears and to hang on in this fashion. He told the rat to bite his ears if anyone should shoot at them as they were swimming across the river. The rat lost his hold two times, necessitating his biting the cow's ear. Each time he did so the cow ducked under water, much to the rat's annoyance. (Laughter from audience.) Perhaps it was for this reason that the rat retained mental reservations when the bush cow, arrived at the other side of the river, made the rat promise not to tell about anything he saw during their adventure. They then proceeded into the bush some distance to a wonderful tree, on the branches of which hung all manner of fine fruits and vegetables, bananas, papaia, yams, tanyas, cassava. The rat ate his fill of corn, while the cow was making his meal, but retained one grain of corn in the corner of his mouth when they left. Arrived back at the village, the rat after some time could no longer keep his secret and told the people what he had seen. "Ah ha!" the people said, and the whole settlement went

539 773 across the river to the remarkable tree. After picking all they could, they decided it was best to cut down the tree. Before doing so they sent the bush cow to the creek with a sifter to get water. Then they cut through the trunk of the tree, but it would not fall down. It was stuck. The top was held in position by a strong piece of bush rope. Every possible means of cutting the rope was tried; men went up, the monkey (who had been eating waiti) went up, and others. All to no avail. Finally the small tree squirrel was sent up. He gnawed and gnawed. "Will it break?" asked the assemblage on the ground. "Just now," he answered. "Hurry and come down, lest you fall and get hurt," they said. "All right," he replied. With two more bites he severed the rope and somehow reached the ground before the tree fell. As soon as the tree came within reach, the people picked all the provisions from its boughs. Just as they finished, the bush cow returned from the creek to report his failure to get water with a sifter. Everyone laughed that he should have been so stupid as to be tricked so easily. There was nothing left for him on the tree but the plums (mope), which he has had to eat ever since. This trick was played on him, of course, to punish him for his selfishness. After the food had been picked the people were in a quandary as to how to get any more, for they knew nothing of agriculture. But the bunia bird came along and saved the day. No one knows where he got the knowledge, but he told the people how to plant, how to make matapis (cassava squeezers) and graters, and how to prepare the various foods. That is how the Caribs came into the knowledge of growing and preparing their foods.

maipuri — bush cow
mumpome — bush rat
keshipuru — tree squirrel
konoto — bunia bird

2. THE TURTLE AND THE TIGER

One day the turtle and the tiger were having a discussion. "What good are you?" inquired the tiger contemptuously of the turtle. "Look at me, I kill everything and have plenty of meat." "Is that so?" replied the turtle. "I can kill just as much meat as you. I can kill a bush cow, for instance." "Well, I'll have to be shown," the tiger replied skeptically, and they parted.

After a time the turtle came to the bush cow's house, and sitting down, asked for something to eat. He was given some of the pepper pot which was on the fire. "Ow," he said, "this pepper pot is hot. Give me some water." "Go over to the river and get some," said the bush cow. "No," said the turtle, "your water there is no good." "What do you want?" the bush cow asked sarcastically. "Do you expect a fancy banana mash or pineapple wine? Or would you like to have me urinate in your mouth, I suppose?" To the cow's surprise the turtle replied, "Yes, yes, that's what I want." And he opened his mouth. The bush cow came over to him and put the end of his penis in the turtle's mouth. "Put it in farther," said the turtle (informant demonstrating with a piece of stick in his own mouth). And just as he did so, the turtle fastened his teeth on the roots of the cow's penis.

With a howl of pain the deceived cow leaped up and dashed out into the bush, the turtle hanging tightly under his stomach. Screaming and crying the bush cow ran on until he dropped dead from pain and loss of blood.

Thus the turtle had his prey. But, upon looking over the situation, after trying to cut up the meat with his bare paws, he was forced to conclude that he could do nothing without a knife. While sitting morosely thinking over the affair, he saw the tiger come along. "Hello," said the turtle, "you see that I have killed this bush cow, but I have no knife with which to cut up the meat." The tiger was very much surprised, and of course had no idea how the turtle had accomplished this deed. But he said, "I'll cut up the meat for you." He forthwith ripped the carcass apart and cut it up, but in doing so he laid aside all of the meat for himself, leaving only the "bare guts" for the turtle. "What's this?" asked the turtle. "You cut up my prey for me and take all the meat, leaving me only the bare guts." "Heh, heh," laughed the tiger and, smacking his lips loudly he prepared to eat the meat. The turtle, chagrined but not despondent, went [illegible] one side with the entrails and, putting them into a bowl with water, boiled them up into a soup. Taking some of the broth in his mouth, he smacked his lips loudly. "Ah, this is good," he murmured. "This is sweet, the best soup I ever tasted." The tiger looked up from the crunching. "Let me try some, if it is so good," he said greedily. "Sure," said the turtle. The tiger

773 tried the soup. "Yes, it's good," he said, "give me some more."
539 He took the bowl and raised it to his lips. "Tilt your head back farther so that you get it all," the turtle advised. As the tiger did so, the turtle pushed the bowl and its steaming contents full into his enemy's face, scalding it and putting out the tiger's eyes. Then he took the remainder of the meat and went away.

The tiger wandered about for some days, dejected and hungry, because, without the use of his eyes, he could not see to hunt.

Finally, rumu, the small carrion crow, came upon the tiger in this condition. "What's the matter?" he inquired. "That turtle put out my eyes and I can't see to hunt," replied the tiger waving his paws in front of his face. "Help me, or I'll starve." "I'll see what I can do," replied rumu. He went into the bush and procured a small round black seed, called konomenuru and he put one in each of the eye-sockets of the tiger. "I can see a little bit now," said the tiger, and rumu went away. The tiger groped about the bush for a few more days when anwana, the larger carrion crow spied him. "What's the matter?" asked the large crow. "Why, that turtle put out my eyes," said the tiger, "and rumu put in some seeds but I still can't see well." "I'll see what I can do," said the crow. So he went and got some locust gum and put it on the tiger's eyes. Immediately the victim began to see better. "Ah, I am well again," he said, "and the only way I can repay you is to kill meat for you." And ever since that time the crows have fed on the kill of the tiger.

waiyamu — turtle
maipuri — bush cow
kashushi — tiger
konomenuru — small seed
rumu — small crow
anwana — big crow
shimidie epoku — locust gum
arokuru — penis

3. Origin of Plant Binas

One day two brothers-in-law went out to hunt. The first knew how, but the other did not. They came upon the trail of an orupere (a huge mysterious snake with two tongues), and the skillful hunter told the other to circle around the other side so as to head 773 off the monster. He really did this in order to get rid of the un- 539 fortunate fellow, because he knew that his brother-in-law, not knowing how to hunt, would probably be a victim to the beast's appetite. The second brother-in-law was not very long by himself when he saw the two immense tongues, which always precede the monster, coming toward him. They came from two opposite directions to encircle him. Being afraid, he hastily climbed a tree, only to find the two red tongues climbing up the trunk after him like snakes, with the monster below. "What shall I do?" he asked himself. But he took out his cutlass and proceeded to cut the tongues as they came toward him, lopping off a small piece each time they advanced. Finally the monster died as the result of this treatment. The man looked down and saw a number of plant binas growing in the monster's side. He came down the tree, took the leaves, and rubbed them all over himself and bathed. Then he went home, killing meat all the way, a thing which he never before had been able to do. When he arrived home with the game, his brother-in-law asked him with surprise how he got all the game. "You sent me to die," said the other, "but I got all these binas from the body of the orupere and am now better off than ever." In this way men first learned the use of plant binas.

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Several informants have told me that if you kill a large camudi 825 (boa constrictor), leave the huge body to decay, and come back after a month, you will find plant binas growing among the bones. Another gigantic snake, called the Aramari, is said to live at the head of the Ianna creek. It is described as a sort of monster twined about the branches of a tree, in a small hill which can be seen from afar. One has to be careful when approaching because the Aramari numbs the senses of spectators, a squall comes up, and with a terrific suction the unwary spectator is drawn into the mouth of the snake, which hangs about six feet above the ground. Old time people used to go to the spot and tie themselves to trees in order to view the beautiful marks on the snake's skin. In this way they got inspiration for designs which they worked in mokru. No binas, however, are attributed to this monster. These tales I regard as elaborations of personal experiences with

825 camudis met while hunting. And it is not unusual that the bina plants should grow up in ground made fertile by a decaying body.

4. A MAN'S ADVENTURES AMONG THE VULTURES

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539 One day a man was out hunting and he shot a carrion crow. When it fell down he saw that it was wearing boots on its feet and a jacket-like garment on its wings and back. "Eh, eh," he said in perplexity, "What's this?" And he took the boots and the jacket and put them on himself. He immediately soared up into the air and found that he could fly home. Arriving at his house, he took the magic boots and jacket off and put them under the rafters of his house. Another man came by one day and, seeing the strange articles of attire in the house, took them down and put them on. Before he knew what was happening he had flown into the air and, in spite of himself, the boots and the jacket carried him toward the west where, on the rocky tops of the mountains, is the home of all crows. He was carried to the house of the original owner of the boots, and he found the wife awaiting his return. He accordingly took his place as husband of the woman, because he now had the outward appearance of her erstwhile spouse, the dead crow. But the father-in-law, the wife's father, was suspicious. "This doesn't seem to be my son-in-law," he kept saying. "I must test him to see." So he told the newcomer that he wanted him to make a bench, but that it must be made to look like him (the crow father-in-law). The supposed son-in-law went out to fulfil the command, but could find no wood. The place was plentifully supplied, however, with very hard stone. He sat down in consternation. How was he to make a bench from stone? While he was in this quandary, the woodpecker came along, and upon finding out the trouble, assured the man that he would help him. Accordingly he set to work and in a very short time pecked out a fine bench from the stone. The son-in-law took the bench home, and the father-in-law laughed and was well pleased. "Ah, I see that I have a good son-in-law," he said. And the man again took his place with his assumed wife. But before long the father-in-law gave evidence again of suspicion. "To prove you are the man I think you are," he said to the son-in-law, "you must go out and build the frame for a house." With the help of the woodpecker, the man fashioned the posts, but he was unable to find a way to

dig the holes in the hard rock. For there was no earth in the vicinity, on a surface of bare rock. Finally the large earthworm came along. Upon learning of the man's distress, he said, "As I go down making a hole in the rock, insert a post each time I go down." With this aid the frame was set up. Upon learning this, the father-in-law said, "All right, but you must finish the house before tomorrow." The man went back, and with the help of the large earthworm succeeded in putting on the roof of solid rock. The worm was so strong that he could pry off huge sheets of rock. The father-in-law was shown the work, but now that the jobs had been done, he no longer wanted a son-in-law of any description. So he said, "You're not my son-in-law. Clear out." The man was glad enough to leave the scene of such trials and went back to his human home. Only after the departure of the man did the father-in-law discover that his daughter was pregnant. The child was a cross between a man and a crow. (Informant a bit indefinite about actual appearance.)

anawana — large carrion crow
wetu — woodpecker
kowi — big earthworm, as big around as a man's arm
sapato — boots
abusarakama — jacket

5. Konowaru and the Woman

A woman had no man. One day she heard Konowaru, the large tree frog, out in the bush, making his cry which sounds like "waa, waa." "If you were a man," she said, "you could bring me some meat to eat." Within a few days a man appeared at her house with a little walisha full of game. This was Konowaru, although unknown to the woman. He emptied the walisha. When the woman tried to put the game back inside, the walisha wouldn't hold it, but when the man put it back, there was plenty of room. For several days the strange man continued to bring in game in the same small walisha. Finally she took him as husband. One day he met a man who had no luck in his hunting. He washed the man's skin with urine and gave the man power to hunt. One day Konowaru and the woman went to the creek to bathe. Arrived there, Konowaru said, "I'll not bathe here. I'll go to my own pool of water farther off in the bush." But the woman laughed and

773 splashed water on his skin. He did not like this, but immediately
539 turned himself into a frog and went back to the trees, where he has stayed ever since.[1]

konowaru — large tree frog
pakuku — small tree frog

6. The Monkey Husband

One day the monkey came down from the trees. He took off his suit (his skin) and made himself look like a man. Being handsome, he soon got himself a wife and, in the course of events, a son. Before this time people knew very little. The monkey would lie in his hammock and play the violin, sing, and beat the drum. He also showed the people how to dance, make pottery, basketry, spin cotton, build houses. In fact, he taught the people all of the arts and crafts which they know at the present time. He visited all of the other settlements and showed them these things also. Finally he came back to his house, and one day told his wife that he wanted to take his little son up to see his mother in the trees. But the wife's mother, who heard this, started cursing him. And he became so vexed that he seized his skin from the rafters of the house where he had hung it up, put it on, and went back to his arboreal home never to return to live among men.

yarakaru — monkey

7. Adventures with the Bush Spirits

Once an epo (bush spirit) set a trap and did not go back again to look at it for three days. His wife, who was in need of meat, told him that he must bring whatever was in the trap, even if it was rotten. In the meantime, a man had got caught in the trap. He was not able to get out and did not know what to do. Finally kurashiwe, a small bush bird, came along and saw his distress. He advised the man to smear himself with his own excrement so that he would smell badly. This the man did, and when the epo owner of the trap appeared, the latter said, "Well, I see I have some rotten meat here, but I must take it anyway." So saying, he took a large leaf from the bush and wrapped up the prey to take it to the creek. At the waterside he set down the man while he went to search for some bush rope with which to bind him up for carrying. While the spirit was thus absent, the man jumped up, and running a distance, climbed a turu tree. Seeing that his meat had run away, the epo went to get his dogs and his companions in order to track the lost meat. The dogs finally led them to the turu tree where the man was hiding. First they tried to chop the tree down, but their axes were made only of turtle shells and soon broke. Then they decided to use fire, which to an epo means jagdman ants. The whole flock of ants swarmed up the tree, but as they came up, the man in the branches spit on them and they fell back. "Eh, eh," said the epos, "we have tried chopping and we have tried fire. What will we do now?" Finally one of them volunteered to ascend the tree, which he did upside down, due to the peculiarities of epos (overhanging superorbital ridges which prevent their looking up). As he made his ascent, the man up in the tree took the midrib from a turu leaf and sharpened the point with his teeth. The epo, previously to his climb, had told his companions on the ground that when he got hold of the man he would yell "Ready," and they should all be standing by with sticks ready to beat the man when the epo threw him on the ground. As the epo came up the tree backwards, the man jammed the sharp turu rib into the epo's rear end with full force. "Ready," the man shouted to the epos on the ground, and when the body of their comrade fell they beat him to death, not discovering their error until the deed was done. Night was now coming on, so they abandoned the tree. The man came down and made for home, but night again caught him, and he had to take refuge in a hollow tree. They took a large number of snakes of assorted sizes and stuffed them in the entrance hole of the retreat. The snakes smelled the man (who, it may be remembered, was covered with excrement), and were much surprised at the rank odor. "If that is what a man smells like, what do I smell like?" said the land camudi, breaking wind. "You smell like a deer," replied the others. (Laughter.) "What do I smell like?" asked the small camudi breaking wind on a thin high note. "You smell like a rat," said the others. All this was very annoying to the man, and, as he happened to see the chicken hawk flying overhead, he called out. "Hello, uncle," he shouted. "Hello, nephew," the hawk called back. "Is that true? Is the hawk really

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[1] Cf. Roth, 1915, *Animism and Folk Lore*, p. 215.

773 539 your uncle?" cried the camudis in alarm. "Yes, can't you see?" answered the man. The snakes backed out of the hole in haste, but as they did so the hawk swooped down and pecked out all their eyes. The man, coming out of the hole, beat them to death and went home safely.[1]

yawaru — dog
towatowa — chicken hawk
iye — camudi snake
kurashiwe — small bush bird

8. Ordeals of a Traveller in the Bush

(The following is a long drawn and often apparently pointless tale, which seems to be a composite made up of elements which I have as yet been unable to identify.)

A man was once lost in the bush and managed to kill an abuya (bush hog). When night came he crawled into a hole at the bottom of a hollow tree to sleep. Before long he heard something coming toward him, knocking the trunks of the trees, "Zoom, zoom." Before long it came to the tree in which the man was lying and knocked the trunk, "Zoom." "Heh," yelled the man from within, "What is this?" said the Thing, which was really a bush spirit called Agnatwatimepu, "I have never had a tree talk back to me this way before. What are you?" he said to the tree.

"It's I—abuya," said the man. "Yes?" replied the spirit, skeptically, "let me see your head." The man stuck out the head of the abuya he had killed. "Now," said the supposed abuya, "let me see you. Stick your head in this hole." The man had only a broken arrow with him, but when the spirit with its great beetling brows put in its head, the man stood above it (for these spirits—epos—can not look upward) and drove the arrow through the back of the spirit's neck.

The next morning he started off again and the akawi bird showed him the way, but he was caught again by night. Near him as he slept was something which kept saying, "I wish day would come so I could get some fresh meat." When morning came the man looked about and found only a turtle, which he cut to pieces with his cutlass.

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[1] Contains incidents of the Kororomanna story, Roth, 1915, *Animism and Folk Lore*, p. 126.

Next night, when darkness came, he was forced to sleep in the only dry spot he could find, under a hanging wood ants' nest. When he was settled a small voice from above asked, "Are you asleep?" "No," replied the man, "not asleep." Three times this question and answer were repeated. After the third time the man became suspicious and got up and went away a short distance. "Are you asleep?" the monotonous voice queried. No answer. Suddenly, with a crash, the whole ant nest fell on the spot where the man had been lying. Seeing that he had tricked the ants, the man took revenge on them by chopping them to bits with his cutlass.

The next night the man was awakened from his sleep by a hoarse voice which kept repeating, "I wish day would come, so I could eat a man." In the morning the man found a land camudi and with his cutlass cut the snake to bits. But as he did so, each of the pieces turned into a frog, so the man burned them all.

The next night he heard takushi (the humming bird) say, "I wish day would come so I could suck out someone's eyes." In the morning the man, whose hearing was very acute, chopped up the bird with his cutlass.

The next night the man heard werushi (the bush pigeon) say that he would like day to come so he could eat stones on the trail. And the man knew when he heard that, that he was not so far from home. He asked the pigeon to show him the way, so the pigeon said to go straight in the direction in which he flew. The man did so, and after a time came to the trail where he found the pigeon picking the gravel. But the man had been so long away from home that he did not know in which direction along the trail his house lay. So the pigeon had to show him. Arrived at home he found his own mother weeping for him. She did not know him. But finally she was convinced that he had actually returned and they lived happily.[1]

9. A Husband, a Wife, and a Bush Spirit

One day a man went to hunt, and while he was gone a huge bush spirit came out of the jungle. It is called Dipopumyu, and was covered with hair. It made love to the man's wife and told her to sing, "Dipopumyu is carrying me away." They danced

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[1] Cf. Roth, 1915, *Animism and Folk Lore*, p. 211.

773 539 about the house, and finally the spirit enticed the woman away with him into the bush. When the man returned to his house he was in a quandary to know what had made off with his wife, but he followed their trail and before long came upon the elopers. "Eh, eh," he said, "how can I kill this thing? My arrows would only get stuck in that big mass of hair." So he made a lamp from beeswax, lit it, and touched it to the hairy one. With a puff the entire hirsute mass caught fire and burned up, killing the spirit. When the hair had burned off, the man found that the body of the spirit was no larger around than your arm and that the feet were very fine and small. Turning to the wife, he saw that she was getting hair all over her (a very unattractive thing to the Caribs). He shaved her off and took her home. If she had stayed with the spirit, she would have been covered with hair in no time.

10. CLEVERNESS OF THE TURTLE

One day the weyamu (turtle) was amusing himself by rolling some rocks down into the river, when the tiger came along. "Let me do that too," said the tiger, "It looks like fun." "This is not the place for you to try this game," replied the turtle, "you are so big that you will hurt yourself here. Come to this other place, where the ground is softer than these rocks for you to roll on." So he took the tiger to a hillside. In the river at the bottom of this hillside, the turtle had previously fixed a number of stakes with sharp points sticking upwards. "Here's a fine place," he said. The tiger curled himself up in a ball and rolled down the hill with great force onto the submerged stakes, which pierced him again and again. He dragged himself out of the water, covered with blood, and lying down on the bank, he died. The turtle took out his teeth to make a necklace and went away.

Soon the tiger's brother came along and saw the body. And, after a bit, he met up with the turtle, who was dancing with the tiger-teeth necklace about his neck and singing a song about how he had killed the tiger. The tiger's brother said, "So you're the one who killed my brother." "Not at all," said the turtle, "I haven't even seen your brother." "What about that necklace?" the other asked. "Why, this is a bush-hog necklace," said the turtle. "I don't believe you and I'm going to kill you," replied the tiger with cold indifference. "Not here," pleaded the turtle, "Take me down to the river side and throw me against the trunk of a turu tree." The tiger agreed that this was perhaps an efficacious method of execution and went with the turtle to the river side where he threw the offender with all his might against the trunk of a turu tree. But the turtle's hard shell glanced off the smooth trunk and the turtle fell into the water unhurt, where he sunk out of sight, and, swimming under water, escaped to a distant point. The tiger, seeing that his victim did not float, went away satisfied that he had killed him.

A short time later the tiger again met the turtle. He was much surprised as he thought that he had killed the turtle before. "No, you luckily didn't kill me," said the turtle, "and you unjustly accuse me of killing your brother." The tiger was half convinced that perhaps he had made a mistake in his allegations. "It is the akuri in that thicket who killed your brother. Come with me," said the turtle. "You go around that side and head him off." While the tiger did this, the turtle climbed up into the top of a tree by a bush rope. When the tiger, very scratched from his fruitless search in the thicket, came back to find him, the turtle was swinging safely in the top of the tree. "Weyamu," he called, whistling. Finally he saw the turtle. "Come down," he said, "I want you to go to a drinking spree with me." The turtle came down and said "All right." They went to a spree where they found a number of tigers already fairly drunk. Upon seeing the turtle they all seized their bows and arrows and chased the turtle out of the house, shooting at him. The arrows, of course, could not pierce the turtle's shell, but he held the points under his arm pit so that it looked as if the arrows were sticking out from him. And he lay down as if dead. Seeing this, the tigers believed that they had killed him and went back to their drink. But the turtle broke all the arrows in the middle of their shafts, and keeping the pointed ends, left the others lying on the ground. When the tigers saw this next morning, they knew that they had again been tricked.

Accordingly, when one of the tigers met the turtle some days later, he said, "So here you are. You fooled us once, but I'm going to kill you for sure this time." "What do you mean?" inquired the turtle innocently. "I wasn't even at your drink party. It must have been some one else." "Oh, no, it wasn't," said the tiger, "I'm going to kill you now." "All right," replied the turtle,

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"you have me in your power, I can't get away, but why don't you go to a more secluded spot where no one can interrupt you while you eat me?" The tiger agreed that that was a sensible idea, so the turtle led him to a thick clump of razor grass. "You wait here and I'll go in and see if its all right," said the turtle. "I can't get away, you know, because you can run much faster than I." So he went into the thicket, but as he did so, he set his broken arrows (the ones kept from the adventure at the drinking spree) in the ground so that they projected out in the direction in which the tiger must come. Arrived in the midst of the thicket, the turtle cried, "All right. Come on. I'm ready to be eaten." The tiger, in a frenzy of revenge and gluttony, dashed forward and impaled himself with shrieks of pain on the planted arrow heads. Thus the turtle once again outwitted his enemies. And to this day he has made his home in the razor grass.

11. Why the Tiger Eats Raw Meats

A man, a dog, and a tiger were out hunting. The dog got an abuya (small bush hog) and the tiger got ponjo (large bush hog). The tiger was weary and asked the dog to roast him a piece of meat. The dog said, "No, I'm weary, too. Roast your own meat." When the man came home, the tiger repeated his request to him. "No," said the man, "I'm weary and will roast my own meat, but none for you." So he roasted his meat and gave some to the dog, but the tiger did not know how to cook, so then and ever since, he has had to eat his meat raw. And he became so vexed with his two companions that ever since that time he has considered the man and the dog particular delicacies to satisfy his appetite.

12. Bush Spirits and Supreme Beings

A long time ago the large spirit which has charge of the whole bush (David says he doesn't know its name) sent to the people to come to him. One man of the group he took with him into the forest and he changed this man into the appearance of a typical bush spirit: a long thin body, covered with hair, projecting eyebrows, no anus, and so forth. The people were naturally alarmed when the man returned. So when the spirit called them to come again, they refused. This vexed the spirit, and ever since, the bush spirits have seized and eaten humans whenever they got the chance. 773 539

(Note: This bush spirit is apparently a sort of literary diety, whose name is not known to David, and whom the piaiyen cannot call to them. Upon being closely questioned David said that he had never seen this head man and did not know what his precise appearance was. But he insisted that this spirit, the headman of the bush, had "fixed everything." In fact he seems to be regarded somewhat as a creator of the world.[1] Upon being asked about the moon and the stars, David said that they were also included in the trials of strength, but once they got started they could not stop, and ever since have been going across the sky. What their nature is he does not know, but the headman fixed them up there. Regarding the phases of the moon, David says that the headman causes it to swell up and to get thin regularly so that men can keep track of the time as it passes. The boss spirit of the universe, managing executive as it were, is Komonakoto (same name, but not same identity as first medicine man). When a piaiyen has become well acquainted with all the other spirits he may succeed in establishing contact with Komonakoto, but he must have long and successful experience to be able to do this.) 538

13. The Primeval Race

A long time ago men did not know much about the animals, so the headman who made the world arranged a series of races in which all the animals were to compete: (1) climbing a mountain; (2) swimming a river; (3) climbing a tree. The tale then proceeds to describe in detail the actions of each of the bush animals in these respective tests, setting forth the Carib knowledge of wild animal behavior as they know it today. I omit these descriptions, which are common knowledge of all travellers who have familiarized themselves in the bush. According to the story, however, the mahm (Tinamou) was inefficient in all of these tests. The bush cow cannot swim well, so when confronted with the swimming test, he ducked under the water and walked across the river on the bottom. In the swimming test the sloth had difficulty in keeping afloat because he was continually breaking wind (laughter); the 773 539

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[1] Cf. Roth, 1915, *Animism and Folk Lore*, Chap. I.

773 headman therefore plugged his anus with mud. The Indians be-
539 lieve to this day that the sloth has no anus.

14. TRADITION CONCERNING ANTECEDENTS OF THE BARAMA CARIBS

173 A group of people were living a long time ago in the Cuyuni head, and for some reason were fighting among themselves continuously, killing people at an astonishing rate. Finally a mother and daughter and a father and son escaped, the males coming first, and made their way north to the Barama head. Here they inter-married, and from the head of the river the Caribs spread down toward the mouth.

This theory of origin is supposed to be confirmed by the fact that David (informant) had a relative, his father's brother-in-law, who had journeyed to the Cuyuni head and there seen what he considered miraculous evidence of that great historic period of fighting: tree stumps of rock, and mountains which were white as cotton. When asked in what way these phenomena confirmed the theory, David replied that they were so unusual that they showed something important had happened there.

174 (The spread of the Caribs from the Barama head rather than vice versa seems to agree with their present distribution, their absence below the mouth of the river and along the coast, and also with Schomburck's observations, that in 1842 the Caribs occupied the upper part of the river and the Akawais the lower.)[1]

PHYSICAL ANTHROPOLOGY

162 THE data concerning the physical anthropology of the Barama
361 Caribs were collected as impartially as possible, with the object of presenting a fair description of the bodily features of the Indian population as it exists at the present time. According to the best estimates the total adult Carib population of the Barama numbers between 275 and 300 individuals. It was not without considerable difficulty that 206 subjects (104 males, 102 females) were finally measured, a difficulty which was due not to the personal objections of the subjects, which were easily overcome, but to the fact that the population is distributed among thirty-three settlements

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[1] See Schomburgk, 1922–23, *Travels in British Guiana*, Vol. I, Chap. 6, Vol. II, Chap. 2.

throughout an area of about four thousand square miles. All but 361
eight of the known settlements were visited in person, and occasional 162
individuals residing in the unvisited settlements were measured elsewhere. Owing to the smallness of the population and the difficulty of collecting data, it was deemed inadvisable to confine the selection of subjects to those showing only "pure Indian" traits. If such a selection had been followed, it would have been impossible to collect a sample of sufficient statistical size to provide a reliable picture of the present physical make-up of the population.[1]

Subjects were required to be recognized members of a Carib 144
settlement on the Barama and to have an estimated age of at least eighteen in the case of females, and of at least twenty-one in the case of males. Cripples, defectives, and individuals who, even though they occupied adult social positions, appeared to be under the age limits, were eliminated. The amount of possible non-Indian blood in the sample thus obtained is indicated by the fact that, of the group of 104 males only 20 possessed the combination of straight, coarse, black hair. Of the 102 females only 14 possessed these characteristics. In sorting for individuals possessing the combination merely of straight, black hair, 28 out of 104 males in the sample appeared, and 33 out of a total of 102 females. Thus, if the possession of straight, black hair be assumed as the minimum criterion of racial purity, 27 percent of the male population and 32 percent of the female population were racially pure in this crude sense. There is no reason to believe that the proportions would have been radically altered had every adult individual in the area been measured.

Technique of measuring and observing followed that taught 141
by Professor E. A. Hooton of Harvard University, and the recording was done on field blanks used by the Division of Anthropology of Harvard University. Head height was taken with the anthropometer, measuring from tragion to the top of the head. Recorders were Cedric Farnum, my guide, and Mr. S. Morgan Hills of Hartford, Connecticut, my companion during the last three months
in the Barama country. The von Luschan porcelain color chart [142]
was used in determining skin color. The statistical computations on the raw data were done in the Harvard Anthropometric Labora-

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[1] See Plates 27-30 for pictures of Carib physical types.

tory by Mrs. Sarah Cotton and assistants, through the courtesy of Professor E. A. Hooton.

In Tables I to III and XIV to XVI inclusive will be found the statistical results of the physical investigation of the Barama Caribs.

A glance at the means of the measurements and observations of the male series reveals the general characteristics of the group. Attention may here be drawn to the short stature (156.82 cm.). Other measurements fall within the small or medium categories of the human range.[1]

Turning to the bodily proportions, we see that the head is mesocephalic, with a cephalic index of 80.22, metriocephalic with a breadth-height index of 81.75, and hypsicephalic with a length-height index of 67.52. In other words, the head verges on the "round" and, from the relative viewpoint, is moderately high.

The face including the jaws is leptoprosopic, as indicated by the total facial index of 88.63, while the upper face is mesen with an index of 47.93. The total face is thus quite long compared with its width, while the upper face is relatively broader, indicating the presence of strong teeth and chin. The breadth of the forehead is 68.71 percent of that of the maximum breadth of the head, as shown by the fronto-parietal index. The width of the face is 92.15 percent of the width of the head, as indicated by the cephalo-facial index. On the other hand, the maximum spread of the jaws (bigonial diameter) is only 73.42 percent of the facial breadth (bizygomatic diameter), as shown by the zygo-gonial index. The forehead is only 74.46 percent as broad as the face, as shown by the zygo-frontal index. The nose, in consonance with the face, is relatively narrow, or leptorrhine, with an index of 71.00.

The upper body is more than half, or 51.52 percent of the total stature, as shown in the relative sitting height. The shoulders are moderately well developed, the biacromial width being 22.80 percent of the stature, as indicated in the relative shoulder breadth. The chest is fairly deep, its depth being 80.86 percent of its width.

Anthropometric Sex Difference. Thirteen measurements were taken on both men and women. Chest depth and chest breadth were not observed on the female series because of scruples of modesty on the part of the subjects. If we calculate a mean of all

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[1] See Martin, 1928, *Lehrbuch der Anthropologie in systematischer Darstellung*, p. 766 ff.

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the thirteen anthropometric means of the female series and a like mean for the male series and compare the two, we see that on this basis the women are 93.66 percent the size of the men, or in other words, the average woman is 7.44 percent smaller than the average man. Such a figure possesses more suggestive value than statistical validity. In all cases the mean measurements of the women are less than the comparable mean measurements of the men. Thus, the female mean stature is 93 percent of the male mean stature. Other percentages follow: biacromial, 94 percent; sitting height, 93 percent; head length, 94 percent; head breadth, 94 percent; head height, 93 percent; minimum frontal, 96 percent; total face height, 94 percent; upper face height, 93 percent; bizygomatic, 93 percent; bigonial, 94 percent; nose height, 94 percent; nose breadth, 90 percent. The average woman is farthest removed from the average man in the breadth of her nose, and most nearly approximates the male in the breadth of her forehead.

Thirteen indices were computed for both males and females. Real sex difference is apparently present in nine of these indices, namely, in relative shoulder breadth, relative sitting height, cephalic index, length-height index, breadth-height index, cephalo-facial index, fronto-gonial index, nasal index, and zygo-gonial index. In comparing the means for the four remaining indices; namely, the fronto-parietal, zygo-gonial, facial, and upper facial, we find that the probable errors of the male and female series overlap in each case, indicating that on the basis of the data in hand no actual sex differences in the four above mentioned bodily proportions can be determined.

Men have relatively wider shoulders than the women, the relative shoulder breadth of women being on the average 97 percent that of the men. Women's legs are proportionately shorter than the men's, the relative sitting height of men being only 99 percent that of women. The women possess relatively wider heads than the men, whose mean cephalic index is only 98 percent that of the women. Women's heads are also relatively higher than men's; the mean length-height index and the mean breadth-height index of men are in each case 97 percent those of women. The mean cephalo-facial index of women is 98 percent that of men, indicating a relatively narrower face as compared with the width of the head. The mean fronto-gonial index of women is

141 97 percent that of men, indicating that the width of the female jaws as compared with the width of the forehead is relatively less than the same proportion in men. The female nose is relatively narrower than the male, as shown by the fact that the mean female nasal index is 95 percent of the mean male nasal index.

The coefficients of variation for both the male and female series have been separately tabulated in Tables VIII and IX. The average male coefficient of variation for measurements is 5.15, as compared with an average female coefficient of 5.77. In the indices the average female variability is again higher than that of the men, with an average coefficient of 6.01 as compared with an average of 5.18 for the male indices. The three most variable male measurements are upper face height, head height, and nose breadth; the three most variable female measurements are biacromial, nose height, and upper face height. The three least variable male measurements are head length, head breadth, and bizygomatic. The three least variable female measurements are the same. The three most variable male indices are thoracic, upper facial, and nasal, while the females are most variable in relative shoulder breadth, upper facial, and nasal. Both sexes agree in showing the least variability in cephalo-facial, relative sitting height, and cephalic indices.

Morphological Characteristics. In Table III are to be found the results of the investigations of those morphological characteristics determined by observation rather than by measurement. Seventy-one physical features were observed on each individual, in addition to the measurements which have been discussed in the foregoing section. In Table III the absolute and percentile incidences for each variational category of each of the 71 observations are presented.

142 We may draw attention to certain characteristic features. Skin color (unexposed) tends to be light brown or red brown. Hair form is variable, the bulk being either straight or light wave, with straight in the ascendency for both sexes. It is to be noted that there is less variability in female hair. Also noteworthy is the proportion of deep wave and curly hair, amounting in the male series to 7.69 percent and 9.62 percent respectively, perhaps indicating negroid mixture. On the other hand, fine hair is not characteristic of this group, practically all individuals possessing

hair of either coarse or medium texture. It is an interesting point, 142 however, that while nearly two-thirds of the males have coarse hair, as compared with about one-third having medium hair, these proportions are almost exactly reversed for females. Baldness occurs very seldom among these people, and the head hair tends to be of medium thickness.

Men's beards, while always present, are small in quantity; no heavy beards were recorded. Body hair also tends to be small in quantity. Head grayness occurs in only about one man out of ten, while beard grayness appears in one man out of twelve. Gray hair is less common in women than in men.

The color of the head hair varies between black and dark brown, with black leading in both sexes. Dark brown hair appears more frequently in women than in men, about one-third of the women exhibiting this feature, in comparison with only one-fifth of the men.

Eyes tend to be dark brown in both sexes.

That celebrated Mongoloid feature, the internal eye-fold, is present in about two-thirds of the individuals of both sexes, while oblique eyes (downward toward the nose) occur in some form in slightly more than four-fifths of both sexes.

The eyebrows meet over the nose in one-third of the male subjects and three-tenths of the females. In the cases in which it occurs, however, the concurrency tends to be small.

Supra-orbital ridges tend to be small or medium, although large brow ridges occur in more than 10 percent of the male subjects, again possibly indicating mixture.

A tendency toward medium development is characteristic of both sexes in regard to forehead height, forehead slope, nasion depression, nasal root height, nasal root breadth. The inferior silhouette of the nasal septum is straight or concave in about 45 percent of the males, and is convex in about 55 percent. Among the women, the convex septum appears in 59 percent of the cases, and the straight or concave type in 41 percent.

The nasal bridge tends to be medium in height, with high bridges recorded in a sufficient number of cases (28 percent of males and 11 percent of females) to be remarkable.

The nasal profile assumes all possible forms with no one shape standing out as predominant. The nasal wings are practically all

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medium or flaring. Of the latter type, males show 56 percent, while females show only 33 percent. The frontal visibility of the nostrils occurs to a small or medium degree in 75 percent of the individuals of both sexes. Lateral visibility of the nostrils, on the other hand, is present in 59 percent of the males, but only in 45 percent of the females, a fact which may be correlated with the higher percentage of flaring nostrils among males. Medium shape nostrils occur in 53 percent of the cases of both sexes. About one-third of the nostrils are thin and the remainder round in both sexes.

Integumental lips of medium thickness are found in slightly less than half of both sexes, with the remainder being roughly divided equally between the thin and thick types. Membranous lips tend to be medium or thick in size while lip eversion tends to be medium and small. A lip seam, tending toward the small or medium, is characteristic of these people.

Prognathism, of either the midfacial or alveolar types, is not pronounced among the Caribs, although it is rarely entirely absent. Prominent chins are very rare. The bilateral type occurs in about two-thirds of the males and in only four-ninths of the females.

Overbite, small or large, occurs in slightly less than two-thirds of the male cases and in more than three-fourths of the females. Nine percent of the males have small under bite and 30 percent bite edge to edge.

Men among the Caribs retain their teeth better than the women. Twenty-four percent of the men and only 16 percent of the women had lost no teeth at all. Sixteen percent of the men and 35 percent of the women had lost more than 17 teeth each. The teeth which remain in the mouths of the members of the group show a large amount of wear, while only 5 percent of the men and 6 percent of the women escaped dental decay. Just as women lose a greater number of teeth than men among the Caribs, so they also suffer from more serious attacks of caries. Thus, while only 30 percent of the men had 17 or more cavities, 44 percent of the women suffered from this large number of defective teeth.

A moderate amount of shortening and crowding of teeth is apparent in both sexes.

The forward projection of the cheek bones (malar frontal projection) seems to show a fundamental difference between the sexes; three-fifths of the males show a medium condition of projection, while the same proportion of females shows large frontal projection of the malars. The lateral projection of the malars in both sexes is characteristically medium, tending toward the large. 142

The ear helix is characteristically small or medium in size, although the female helix is large in 42 percent of the cases, whereas a large male helix occurs in only 13 percent of the cases. The antihelix tends to be small or medium, in size. Darwin's point, usually small, occurs in 23 percent of the males and 35 percent of the females.

The ear lobe is free in roughly two-fifths of both sexes (37.50 percent of males, 40 percent of females), but the soldered type occurs almost twice as frequently as the attached type among the males, whereas the attached type occurs more frequently than the soldered type among females.

The majority of ears are of medium size in both sexes, although the female tends more strongly to small ears than does the male. Projecting ears of noticeable proportions occur in only 7 percent of the males and 2 percent of the females.

Temporal fullness tends to be medium or large in both sexes, although the tendency toward pronounced fullness is more observable in the males. Occipital protrusion is medium or small. The Caribs, however, do not characteristically have flat occiputs. Lambdoid flattening is recorded as more pronounced among males than among females, although this may be due to the fact that it is more easily recognized in males because of their short hair.

Cranial assymmetry was not recorded in any female subject, but is noticeable in 3 percent of the males.

Body build tends to be medium in both sexes, with a greater variability in both directions recorded for the females.

Comparison of the Barama Caribs with the Central Caribs. 144 For comparative purposes we have only two other anthropometric series from British Guiana, those measured by Dr. W. C. Farabee and published, without statistical treatment other than the calculation of arithmetic means, in his monographs *The Central Arawaks* (Philadelphia, 1918) and *The Central Caribs* (Philadelphia, 1924). Among the Central Caribs Dr. Farabee obtained measurements of 71 male and 28 female individuals, members of six more or less related Carib-speaking tribes of southern and central British

Guiana (Macusi, Parakuta, Piau, Waiwai, Cumayena, and Uracuna). Because of the comparatively small number of subjects measured in any one tribe, the entire number has been seriated into one male series and one female series, and statistical constants have been calculated from these seriations. We thus have for comparison a male series and a female series of Central Caribs, which are, so far as I know, the only Carib individuals in addition to those of the Barama that have been measured in British Guiana. The means and constants of the anthropometric measurements of the Central Caribs are to be found in Table IV.

The differences between the means of the comparable measurements of the two male series, the probable errors of the differences, and the x P.E.[1] are presented in Table X. If it is assumed that an x P.E. of 3 and over indicates significant tribal difference, it will be noted that no significant differences are shown in stature, biacromial, chest breadth, sitting height, and bizygomatic between the two male series. On the other hand differences of importance are present (in the order of their size) in chest depth, nose height, upper face height, total face height, nose breadth, head length, minimum frontal, and head breadth. The dimensions of the head, total face height, and nose height are greater in the Barama group than in the Central group, while nose breadth, upper face height, bigonial, minimum frontal, and chest depth are lower. The indicated difference in chest depth (x P.E.: 38.71) may reflect differences in technique which have exaggerated the actual tribal differences.[2] The same may be said of nose height, upper face height, and total face height, all of which measurements depend upon the determination of nasion. It is curious, however, that the Barama group exceeds in total face height, while it falls below the Central group in upper face height, a result which is inconsistent with the idea that the differences in facial measurements between the groups are due to differences between the investigators in locating nasion. The comparison of face heights simply seems to indicate the presence of longer chins or teeth or both in the Barama group, if we ignore further possible differences in technique. The differ-

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[1] x P.E. $= \frac{\text{Difference between two means}}{\text{Probable error of the difference}}$

Probable error of the difference $= \sqrt{\text{P.E.}_A{}^2 + \text{P.E.}_B{}^2}$

[2] On the Barama series, chest depth was taken on the normally deflated chest at the level of the nipples with the anthropometer. Measuring was done from the left side.

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ences in head length and head breadth, measurements in which variations of technique are less likely to occur, may reasonably be taken at their face value.

Although it is essential to bear in mind the factor of possible differences in technique in considering the quantitative results of our comparisons, little profit can be gained in discussing this factor further at this point, inasmuch as we are unable to compare the techniques of the two investigators.

A comparison of the indices of the two groups also shows a considerable number of significant differences. (See Table XI.) Of the nine comparable indices, three show no significant differences, namely, relative shoulder breadth, relative sitting height, and cephalic index. On the other hand, the Barama group exceeds the Central group in thoracic index and facial index, indicating deeper chests and longer faces. The Central Caribs exceed the Barama Caribs in cephalo-facial, zygo-gonial, upper facial, and nasal index.

Let us now examine the differences between two female groups, tabulated in Table XII and Table XIII. We have, in the first place, twelve comparable measurements. Of these, six show no significant differences, namely, stature, biacromial, sitting height, head breadth, bizygomatic, upper face height. Significant tribal differences are shown in head length, total face height, and nose length, in each of which measurements the Barama females exceed the Central females, and also in minimum frontal, bigonial, and nose breadth, in each of which measurements the Central women exceed the Barama women. Of eight indices which we have for both groups, three show no significant differences, namely, relative shoulder breadth, relative sitting height, and cephalo-facial. The Barama group exceeds the other in facial index, but is exceeded by the Central group in cephalic index, zygo-gonial, upper facial, and nasal indices.

It would seem, on the face of the evidence in hand, that we are dealing here with two distinct physical groups. In comparing the two male series, we find that 64 percent of the comparable measurements and 66 percent of the indices show significant differences as between the two groups. With the females the two groups are significantly different in 50 percent of the measurements and 62 percent of the indices. Let us see how consistent the two sexes are in regard to the differences between the two groups. We find that both sexes agree in showing no significant differences in stature, biacromial, sitting height, bizygomatic, relative shoulder breadth, and relative sitting height. We find that both males and females of the Barama group exceed the respective sex of the Central group in head length, total face height, nose height, and facial index, whereas they both fall behind the respective sex of the Central group in minimum frontal, bigonial, nose breadth, zygogonial index, upper facial index, and nasal index. The two sexes do not agree in significant differences between the two groups in regard to head breadth, upper face height, cephalo-facial index, and cephalic index. In neither upper facial height, head breadth, nor cephalo-facial index do the females of the two series show significant differences, whereas the Barama males exceed the Central males in head breadth and fall below them significantly in upper face height and cephalo-facial index. In the cephalic index, on the other hand, the male series show no significant difference, whereas the Barama female index falls significantly below that of the Central females. An inspection of tables X-XIII will show that in each of these four traits, the sexes are consistent with each other in the tendency of divergence, even though the divergence is statistically significant in only one sex. For instance, the cephalic index in both the male and the female Barama series falls below that of the respective sex in the Central series, but is statistically significant only as between the two female series.

In summary we may say that the Barama sample, while agreeing with the Central sample in stature, proportions of the body, and cephalic index, differs from the southern type in its longer and relatively narrower nose, its longer and relatively narrower face.

Comparison of the Barama Caribs with the Central Arawaks. To complete the orientation of the Barama Caribs in relation to other groups of British Guiana for which we have data, we must compare the Barama group with the Central Arawaks published by Farabee.[1] Dr. Farabee obtained measurements of 32 males and 18 females, members of four Arawak-speaking tribes of south central British Guiana (Wapisiana, Taruma, Mapidian, and Ataroi.) The data on these individuals have been grouped into one male series and one female series and treated statistically in the same way as the data on the Central Caribs, as described in the preceding section. (See Tables VI, VII, X, XI, XII and XIII.)

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[1] Farabee, 1918, *The Central Arawaks*, pp. 176–182.

In comparing the means of the measurements of the two male series (Table X) we see that six of the fourteen comparable measurements show no significant differences. These are stature, biacromial, sitting height, head length, head breadth, and bizygomatic. In the eight other measurements, the Barama male mean falls significantly below that of the Arawak mean. These measurements are chest depth, chest breadth, minimum frontal, bigonial, total face height, upper face height, nose height, and nose breadth. Turning to a comparison of the indices of the two male series, we find no significant differences in the relative shoulder breadth, relative sitting height, and cephalic index. The thoracic index of the Barama group is significantly higher than that of the Arawak group. On the other hand, the Barama group falls significantly below the Arawak group in respect to cephalo-facial index, zygo-gonial index, upper facial index, and nasal index.

If we compare the means of the twelve measurements given for the females (Table XII), we find that the two groups are not significantly different in biacromial, sitting height, minimum frontal, bizygomatic, bigonial, and nose breadth. The Barama females exceed the Carib females to a significant extent in head length, head breadth, total face height, and nose height, while the Arawak females are significantly superior in stature and upper face height. In the indices the two groups of females are not significantly different in respect to relative sitting height, cephalic index, cephalo-facial index, and zygo-gonial index, whereas the Arawak group exceeds the Barama group significantly in all the three remaining indices, namely, relative shoulder breadth, upper facial index, and nasal index.

In summary it is somewhat surprising to note that, in the light of the statistics, the Arawaks are significantly different from the Barama Caribs in a proportionately fewer number of traits than are the Central Caribs. Only 57 percent of the measurements of the two male series show significant differences, as compared with 64 percent when the comparison was made with the Central Caribs. Sixty-two percent of the male indices are significantly different between the Barama and Arawak groups, as compared with 66 percent between the Barama and Central Carib groups. Fifty percent of the comparable female measurements of the Arawak as well as of the Central female groups show significant difference, but only 43 percent of the Arawak female indices are significantly different from those of the Barama females, as compared with 62 percent in the case of the Central females. The unanimity of divergent tendency as exhibited by both sexes is less marked in the Arawak group than in the case of the Central Caribs. Only in biacromial and bizygomatic is no significant difference shown by either sex. Both sexes of the Arawaks exceed the Barama Caribs significantly in respect to upper face height, upper facial index, and nasal index.

The reliability of these results is somewhat lessened by the smallness of the Arawak sample, particularly the female portion of it. If we assume the results to be suggestive in the absence of further comparative data, and summarize the differences between the respective male groups alone, we note a fundamental agreement between the Barama Caribs and the Central Arawaks in absolute stature, breadth of shoulders, length of the upper body, dimensions of the head, and breadth of the face, an agreement which extends to the relative shoulder breadth, relative sitting height, and cephalic index. The Arawak men, however, differ fundamentally from the Barama Carib men in that they possess absolutely broader and deeper chests, wider foreheads, wider jaws, longer faces (both in respect to the whole face and the upper face), longer and wider noses. From the relative viewpoint, on the other hand, the Barama Caribs possess deeper chests, longer upper faces, and narrower noses. The Barama face is narrower in relation to the head, and the jaws are narrower in relation to the face, than is the case among the Arawaks.

In view of the fundamental agreement between the Barama Caribs and the Central Arawaks in regard to such basic traits as stature, relative shoulder breadth, relative sitting height, *and* cephalic index (traits of great racial significance, and dependent upon measurements in which differences of technique between investigators are reduced to the minimum) we hesitate to assign the two groups to separate populations. Comparison of the averages of the coefficients of variation for the three groups, in Tables VIII and IX, shows that in measurements and indices for both sexes, the Arawak variability approaches that of the Barama Caribs more closely than does the Central Carib average variability. Although the comparative heterogeneity of the Arawak group may be due to smallness of sample, it is possible that the comparatively high variability within the Barama Carib group is due to a mixture of racial elements within the sample. This becomes more probable when the fact, cited previously, is considered that only 27 percent of the Barama males and 32 percent of the females show the combination of the supposed "Indian" traits of straight and black hair.

A Selected Group of Barama Caribs Possessing Straight and Black Hair, Compared with the Central Caribs and Central Arawaks. A group composed of those individuals possessing the "Indian" traits of straight and black hair, and which may be said to approach the basic unmixed physical type of the Barama population, has been segregated from the unrefined series. This procedure involves the assumption that an individual possessing hair of a shade lighter than black, or hair which is not perfectly straight, has a certain amount of non-Indian blood in his ancestry. In this selected group, which for the sake of convenience we shall call the "pure group," we have 28 males and 33 females. The metrical, indicial, and morphological characteristics of the pure group are presented in Tables XIV, XV, and XVI.

The determination of the racial strains which have gone into the making of the present Barama population is a rather complex problem, the solution of which must be deferred to a later paper. In passing, however, it may be suggestive, though by no means precise, to call attention to the fact that the typical man of the pure group is smaller in every measurement, with the exception of head height, than the typical male member of the unrefined group.

In Tables XVII–XX will be found the statistical results of the comparison of means of measurements and indices of the pure Barama group with those of the Central Caribs and Central Arawaks respectively.

Examining first the differences between the pure Barama males and the Central Carib males, we find that the chest breadth of the pure group is significantly less than that of the Central Caribs, a difference which was not significant when the comparison was made with the unrefined Barama group. On the other hand, we find that the breadth of the head, which was significantly greater in the former comparison is now not significantly different. Other traits which showed significant differences between the Central Caribs and the unrefined Barama group still show significant difference when the comparison is made with the refined Barama group. There is a general tendency, however, for the degree of difference, as shown by the size of x P.E., to be diminished. Thus, there is less difference, although it is still significant, in the head length, nose breadth, total face height, chest depth, minimum frontal, bigonial, upper face height, and nose breadth. This is to say that, for instance, although the head is still significantly longer in the pure Barama group, the difference between the two means, taking probable errors into account, is less. In the above mentioned measurements there thus seems to be a tendency toward approximation between the two groups. On the other hand, it will be noticed that the differences in upper face height and nose breadth are accentuated.

Turning to the indices, we see that the difference in thoracic index is no longer significant. The differences in cephalo-facial index and in upper facial index, though still significant, have increased in this comparison, while the differences in zygo-gonial and nasal index, also still significant, have become less marked.

The same incidence of significant difference occurs in the comparable measurements of this as in the former comparison: 64 percent of the comparable measurements show significant difference. In the indices, the incidence of difference is decreased: 57 percent of the comparable indices show significant difference in this comparison, as compared with 66 percent between the whole Barama series and the Central Caribs. There is a tendency toward approximation all along the line, except in upper face height, nose breadth, cephalo-facial index, and upper facial index, in which traits the already significant differences between the two groups are accentuated by refining the Carib sample. Since, however, all the traits which showed significant differences in the former comparison, with the exception of head breadth and thoracic index, show significant differences in the comparison involving the refined Barama group, we can hardly say that the divergence between the Barama and Central Carib samples, as shown in the comparison of the unrefined Barama group, is materially lessened when the comparison is made with the refined group.

If we examine the comparison between the females of the pure Barama group and of the Central group, we find that the number of divergences is increased. Of the comparable measurements, 58 percent now show significant differences, as compared with 50 percent in the former comparison, and of the indices, 75 percent show significant difference as compared with 62 percent in the former comparison. Upper face height and biacromial are now significantly different, although nose breadth, which was significantly different in the former comparison, is no longer significant. Relative shoulder breadth, which showed no significant difference formerly, is now significantly less in the pure Barama group. Of those traits which showed significant difference in the unrefined Barama group, the present comparison shows the differences in head length, upper facial index, and cephalic index to be accentuated, as indicated by the size of the x P.E. The differences in total face height, nose height, minimum frontal, bigonial, zygo-gonial, nasal index, and facial index are still significant, but somewhat smaller. As regards the females, therefore, the refining of the Barama sample seems to bring out differences which on the whole separate the groups still farther.

Let us now compare the males of the pure Barama group with the males of the Central Arawaks. In the first place, we see that the incidence of significant difference remains the same. As in the comparison with the unrefined Barama series, 57 percent of the comparable measurements and 62 percent of the comparable indices show significant differences. We find, however, that sitting height, which in the former comparison showed no significant difference, is now significantly less in the Barama series. The same is true of relative shoulder breadth. On the other hand, total face height and thoracic index, which showed significant differences in the former comparison, are no longer significantly different. The differences in nose height, chest breadth, upper face height, cephalo-facial index, and upper facial index are increased, while those in chest depth, minimum frontal, bigonial, nose breadth, zygo-gonial index, and nasal index are decreased. On the whole, the relative positions of the two groups have not been greatly changed.

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In comparing the females of the pure Barama group with those of the Arawak group, we find that the situation here also has not been greatly changed by the refining of the Barama group. Incidence of difference remains the same for both measurements and indices as when the comparison was made with the unrefined Barama group. Fifty percent of the measurements and 43 percent of the indices show significant difference. In the measurements we find that bizygomatic, which in the former comparison showed no significant difference, is now significantly greater in the Barama group than in the Arawak group. Upper face height, which was formerly significantly less in the Barama group, now shows no significant difference. Other traits formerly showing significant difference continue to do so, although the difference in head length, head breadth, biacromial, and relative shoulder breadth are increased, while those in total face height, nose height, upper facial index, and nasal index are decreased.

To summarize the relations of the basic Barama population with the Central Caribs and the Central Arawaks we may say, in the light of the data at hand, that from the metrical point of view the three samples may probably be considered subtypes of one general racial group. There is a general agreement in the measurements and proportions of the body and in the cephalic index, but the number of significant differences in the measurements and proportions of the chest, forehead, face, jaws, and nose is too great to allow these groups to be classed together as a single type. There is a slightly greater tendency toward convergence displayed between the Barama and Central Arawak groups, than between the Barama Caribs and the Central Caribs.

Table I

ANTHROPOMETRIC MEASUREMENTS OF BARAMA CARIBS BY SEX

Measurement	Sex	No.	Range	Mean	S.D.	V.
1. Stature	M	104	141–179	156.82 ± .40	6.09 ± .28	3.88 ± .18
(c)*	F	99	129–158	145.78 ± .41	6.09 ± .29	4.18 ± .20
2. Biacromial	M	104	25– 42	35.84 ± .13	1.92 ± .09	5.36 ± .25
(c)	F	102	22– 54	32.57 ± .20	3.03 ± .14	9.30 ± .44
3. Chest Breadth	M	103	23– 40	28.17 ± .12	1.86 ± .09	6.60 ± .31
(c)	F	Not Observed				
4. Chest Depth	M	103	14– 19	16.78 ± .05	.82 ± .04	4.89 ± .23
(c)	F	Not Observed				
5. Sitting Height	M	103	71– 88	80.94 ± .21	3.18 ± .15	3.93 ± .18
(c)	F	101	62– 88	75.60 ± .25	3.66 ± .17	4.84 ± .23
6. Head Length	M	104	172–202	186.63 ± .38	5.67 ± .26	3.04 ± .14
(m)	F	102	158–196	177.42 ± .41	6.18 ± .29	3.48 ± .16
7. Head Breadth	M	104	135–164	149.59 ± .34	5.22 ± .24	3.49 ± .16
(m)	F	102	132–161	144.31 ± .32	4.77 ± .22	3.10 ± .15
8. Head Height	M	48	100–147	122.90 ± .85	8.72 ± .60	7.10 ± .49
(m)	F	57	100–135	114.82 ± .70	7.84 ± .50	6.83 ± .43
9. Minimum	M	104	88–123	102.47 ± .38	5.82 ± .27	5.68 ± .27
Frontal (m)	F	102	85–108	98.42 ± .29	4.29 ± .20	4.36 ± .21
10. Bizygomatic	M	104	125–149	137.80 ± .32	4.85 ± .23	3.52 ± .16
(m)	F	102	115–149	130.45 ± .36	5.35 ± .25	4.10 ± .19
11. Bigonial	M	104	88–123	100.82 ± .38	5.76 ± .27	5.71 ± .27
(m)	F	102	80–123	94.82 ± .39	5.84 ± .28	6.16 ± .29
12. Total Face	M	104	110–134	121.90 ± .34	5.15 ± .24	4.22 ± .28
Height (m)	F	102	90–134	115.00 ± .42	6.25 ± .30	5.43 ± .26
13. Upper Face	M	104	55– 79	66.00 ± .30	4.60 ± .22	6.97 ± .33
Height (m)	F	102	50– 74	63.00 ± .32	4.80 ± .23	7.62 ± .36
14. Nose Height	M	104	44– 63	54.06 ± .25	3.76 ± .18	6.96 ± .33
(m)	F	102	40– 63	51.62 ± .29	4.28 ± .20	8.29 ± .39
15. Nose Breadth	M	104	31– 51	38.15 ± .20	3.00 ± .14	7.86 ± .37
(m)	F	102	28– 42	34.49 ± .16	2.46 ± .12	7.13 ± .34

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* A "(c)" indicates that the figures are in centimeters; an "(m)" indicates that the figures are in millimeters.

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TABLE II

ANTHROPOMETRIC INDICES OF BARAMA CARIBS BY SEX

Index	Sex	No.	Range	Mean	S.D.	V.
1. Relative Shoulder Br.	M	104	16– 25	22.80 ± .08	1.16 ± .05	5.09 ± .24
	F	99	14– 37	22.22 ± .14	2.08 ± .10	9.36 ± .45
2. Thoracic	M	103	57– 92	80.86 ± .30	4.60 ± .22	5.69 ± .27
	F	Not Observed				
3. Relative Sitting Height	M	103	46– 55	51.52 ± .11	1.68 ± .08	3.26 ± .15
	F	98	46– 57	51.92 ± .12	1.80 ± .09	3.47 ± .17
4. Cephalic Index	M	104	71– 88	80.22 ± .20	3.09 ± .14	3.85 ± .18
	F	102	74– 91	81.06 ± .18	2.73 ± .13	3.37 ± .16
5. Length-height	M	48	46– 81	65.75 ± .55	5.67 ± .39	8.62 ± .59
	F	57	52– 75	67.79 ± .39	4.35 ± .27	6.42 ± .41
6. Breadth-height	M	48	59– 94	81.75 ± .64	6.60 ± .45	8.07 ± .56
	F	57	68– 97	83.46 ± .50	5.58 ± .35	6.69 ± .42
7. Fronto-parietal	M	104	57– 83	68.71 ± .26	3.90 ± .18	5.68 ± .27
	F	102	60– 77	68.29 ± .20	3.06 ± .14	4.48 ± .21
8. Cephalo-facial	M	104	85–102	92.15 ± .19	2.88 ± .13	3.12 ± .15
	F	102	76– 99	90.44 ± .24	3.54 ± .17	3.91 ± .18
9. Zygo-gonial	M	104	63– 86	73.42 ± .25	3.78 ± .18	5.15 ± .24
	F	102	60– 86	73.24 ± .26	3.93 ± .19	5.37 ± .25
10. Fronto-gonial	M	104	75–119	98.60 ± .42	6.35 ± .30	6.44 ± .30
	F	102	70–114	96.55 ± .43	6.50 ± .31	6.73 ± .32
11. Facial	M	104	78–101	88.63 ± .27	4.08 ± .19	4.60 ± .22
	F	102	69–101	88.30 ± .30	4.50 ± .21	5.10 ± .24
12. Upper Facial	M	104	40– 57	47.93 ± .23	3.42 ± .16	7.13 ± .33
	F	102	37– 57	48.02 ± .22	3.30 ± .16	6.87 ± .32
13. Nasal	M	104	58– 93	71.00 ± .41	6.24 ± .29	8.79 ± .41
	F	102	46– 90	67.52 ± .43	6.51 ± .31	9.64 ± .46
14. Zygo-frontal	M	104	64– 87	74.46 ± .23	3.48 ± .16	4.67 ± .22
	F	102	68– 83	75.38 ± .21	3.08 ± .14	4.09 ± .19

TABLE III

MORPHOLOGICAL CHARACTERISTICS OF BARAMA CARIBS BY SEX

	Male		Female	
	N.	%	N.	%
1. *Skin Color Inner arm*				
Swarthy	2	1.96	...	....
Red brown	17	16.67	31	30.39
Light brown	76	74.51	68	66.67
Light yellow brown	...	....	1	.98
Yellow brown	4	3.92	...	....
Medium brown	3	2.94	2	1.96
Total	102	100.00	102	100.00
2. *Vascularity*				
Absent	90	86.54	97	95.10
Small	14	13.46	5	4.90
Total	104	100.00	102	100.00
3. *Freckles*				
Absent	88	84.62	53	51.96
Small	13	12.50	29	28.43
Medium	2	1.92	19	18.63
Many	1	.96	...	....
Massed	...	....	1	.98
Total	104	100.00	102	100.00
4. *Moles*				
Absent	7	6.73	9	8.82
Few	89	85.58	87	85.29
Many	8	7.69	6	5.88
Total	104	100.00	102	99.99
5. *Hair form*				
Straight	47	45.19	66	66.00
Light wave	39	37.50	29	29.00
Deep wave	8	7.69	2	2.00
Curly	10	9.62	3	3.00
Total	104	100.00	100	100.00
6. *Hair texture*				
Coarse	65	63.73	37	37.00
Medium	37	36.27	62	62.00
Fine	...	....	1	1.00
Total	102	100.00	100	100.00
7. *Handedness*				
Right	100	98.04	99	98.02
Left	2	1.96	2	1.98
Total	102	100.00	101	100.00

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TABLE III (Cont.)

	Male		Female	
	N.	%	N.	%
8. *Head hair, quantity*				
Small	8	7.69	9	8.82
Medium	77	74.04	81	79.41
Much	19	18.27	12	11.76
Total	104	100.00	102	99.99
9. *Baldness*				
Absent	98	94.23	98	98.00
Small	5	4.81	2	2.00
Medium	1	.96	...	....
Total	104	100.00	100	100.00
10. *Beard quantity*				
Absent	...	....	97	95.10
Very small	46	44.66	5	4.90
Small	50	48.54	...	....
Medium	7	6.80	...	....
Total	103	100.00	102	100.00
11. *Body hair*				
Absent	4	3.88	2	1.96
Small	82	79.61	95	93.14
Medium	17	16.50	5	4.90
Total	103	99.99	102	100.00
12. *Grayness, head*				
Absent	94	90.38	99	97.06
Small	8	7.69	3	2.94
Medium	2	1.92	...	....
Total	104	99.99	102	100.00
13. *Grayness, beard*				
Absent	95	92.23	102	100.00
Small	6	5.83	...	....
Medium	2	1.94	...	....
Total	103	100.00	102	100.00
14. *Hair color, head*				
Black	84	80.77	64	62.75
Dark brown	19	18.27	36	35.29
Brown	...	....	1	.98
Red brown	1	.96	1	.98
Total	104	100.00	102	100.00
15. *Hair color, face (beard, mustache)*				
Black	98	94.23	102	100.00
Dark brown	2	1.92	...	....
Brown	1	.96	...	....
Red brown	2	1.92	...	....
Gold brown	1	.96	...	....
Total	104	99.99	102	100.00

TABLE III (Cont.)

	Male		Female	
	N.	%	N.	%
16. *Eye color*				
Black	6	5.77	2	1.96
Dark brown	88	84.62	95	93.14
Dark light brown	9	8.65	3	2.94
Gray blue	1	.96	2	1.96
Total	104	100.00	102	100.00
17. *Iris*				
Clear	69	66.35	70	68.63
Rayed	26	25.00	25	24.51
Zoned	9	8.65	5	4.90
Spotted	...	...	2	1.96
Total	104	100.00	102	100.00
18. *Eye-folds, external*				
Absent	34	32.69	38	37.25
Small	24	23.08	28	27.45
Medium	36	34.62	25	24.51
Large	10	9.62	11	10.78
Total	104	100.01	102	99.99
19. *Eye-folds, median*				
Absent	27	26.21	29	28.43
Small	19	18.45	26	25.49
Medium	42	40.78	38	37.25
Large	15	14.56	9	8.82
Total	103	100.00	102	99.99
20. *Eye-folds, internal*				
Absent	34	33.01	35	34.31
Small	26	25.24	31	30.39
Medium	29	28.16	25	24.51
Large	14	13.59	11	10.78
Total	103	100.00	102	99.99
21. *Eye obliquity*				
Absent	21	20.39	19	18.63
Small	46	44.66	32	31.37
Medium	34	33.01	49	48.04
Large	1	.97	2	1.96
Down	1	.97	...	....
Total	103	100.00	102	100.00
22. *Eye opening height*				
Small	27	25.96	21	21.00
Medium	71	68.27	69	69.00
Large	6	5.77	10	10.00
Total	104	100.00	100	100.00

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TABLE III (Con.)

	Male		Female	
	N.	%	N.	%
23. *Eyebrow thickness*				
Small	33	31.73	49	48.04
Medium	60	57.69	48	47.06
Large	11	10.58	5	4.90
Total	104	100.00	102	100.00
24. *Eyebrow concurrency*				
Absent	65	62.50	73	71.57
Small	36	34.62	27	26.47
Medium	3	2.88	2	1.96
Total	104	100.00	102	100.00
25. *Browridges*				
Absent	10	9.62	32	31.68
Small	39	37.50	43	42.57
Medium	44	42.31	25	24.75
Large	11	10.58	1	.99
Total	104	100.01	101	99.99
26. *Forehead height*				
Small	18	17.31	77	75.49
Medium	71	68.27	21	20.59
Large	15	14.42	4	3.92
Total	104	100.00	102	100.00
27. *Forehead slope*				
Absent	1	.96	2	1.96
Small	22	21.15	64	62.75
Medium	60	57.69	32	31.37
Large	21	20.19	4	3.92
Total	104	99.99	102	100.00
28. *Nasion depression*				
Absent	8	7.69	19	18.63
Very small	4	3.85	4	3.92
Small	28	26.92	47	46.08
Medium	47	45.19	28	27.45
Large	17	16.35	4	3.92
Total	104	100.00	102	100.00
29. *Nasal root height*				
Very small	1	.96	2	1.96
Small	13	12.50	26	25.49
Medium	78	75.00	69	67.65
Large	12	11.54	5	4.90
Total	104	100.00	102	100.00
30. *Nasal root breadth*				
Very small	...	....	...	....
Small	20	19.23	6	5.88

TABLE III (Cont.)

	Male		Female	
	N.	%	N.	%
Medium	71	68.27	77	75.49
Large	13	12.50	19	18.63
Total	104	100.00	102	100.00
31. *Nasal septum*				
Straight or concave	45	44.55	41	40.59
Convex	56	55.45	60	59.41
Total	101	100.00	101	100.00
32. *Nasal bridge height*				
Small	8	7.69	30	29.41
Medium	67	64.42	61	59.80
Large	29	27.88	11	10.78
Total	104	99.99	102	99.99
33. *Nasal bridge breadth*				
Small	5	4.81	4	3.92
Medium	62	59.62	75	73.53
Large	37	35.58	23	22.55
Total	104	100.01	102	100.00
34. *Nasal profile*				
Concave	25	24.51	43	42.16
Straight	34	33.33	21	20.59
Convex	28	27.45	22	21.57
Concavo-convex	15	14.71	16	15.69
Total	102	100.00	102	100.01
35. *Nasal tip thickness*				
Small	16	15.53	31	30.39
Medium	55	53.40	56	54.90
Large	32	31.07	15	14.71
Total	103	100.00	102	100.00
36. *Tip inclination*				
Up, medium	7	6.73	17	16.67
Up, small	40	38.46	51	50.00
Horizontal	...	....	1	.98
Down, small	47	45.19	33	32.35
Down, medium	10	9.62	...	....
Total	104	100.00	102	100.00
37. *Nasal wings*				
Compressed	1	.98	2	1.96
Medium	56	54.90	67	65.69
Flaring	45	44.12	33	32.35
Total	102	100.00	102	100.00
38. *Nostrils, visibility from front*				
Absent	14	13.46	13	12.75
Small, medium	76	73.08	75	73.53
Large	14	13.46	14	13.73
Total	104	100.00	102	100.01

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TABLE III (Cont.)

	Male N.	Male %	Female N.	Female %
39. *Nostrils, lateral visibility*				
Absent	43	41.35	57	55.88
Present	61	58.65	45	44.12
Total	104	100.00	102	100.00
40. *Nostrils, shape*				
Thin	37	35.38	33	32.35
Medium	55	52.88	54	52.94
Round	12	11.54	15	14.71
Total	104	100.00	102	100.00
41. *Nostrils, axes*				
Parallel	2	1.92	4	3.92
Oblique, small	27	25.96	25	24.51
Oblique, large	48	46.15	46	45.10
Transverse	27	25.96	27	26.47
Total	104	99.99	102	100.00
42. *Lips, integumental*				
Small	23	22.12	26	25.74
Medium	51	49.04	46	45.54
Large	30	28.85	29	28.71
Total	104	100.01	101	99.99
43. *Lips, membranous upper*				
Very small	4	3.85	2	1.98
Small	19	18.27	17	16.83
Medium	43	41.35	59	58.42
Large	38	36.54	23	22.77
Total	104	100.01	101	100.00
44. *Lips, membranous lower*				
Small	11	10.68	15	14.85
Medium	73	70.87	63	62.38
Large	19	18.45	23	22.77
Total	103	100.00	101	100.00
45. *Lip eversion*				
Small	31	29.81	20	19.61
Medium	53	50.96	65	63.73
Large	20	19.23	17	16.67
Total	104	100.00	102	100.01
46. *Lip seam*				
Absent	7	6.86	3	3.00
Small	37	36.27	58	58.00
Medium	31	30.39	16	16.00
Large	27	26.47	23	23.00
Total	102	99.99	100	100.00

TABLE III (Cont.)

	Male		Female	
	N.		N.	
47. *Mid-facial prognathism*				
Absent	2	1.92	12	[illegible]1.76
Small	34	32.69	59	57.84
Medium	55	52.88	25	24.51
Large	13	12.50	6	5.88
Total	104	99.99	102	99.99
48. *Alveolar prognathism*				
Absent	7	6.73	4	3.92
Small	30	28.85	38	37.25
Medium	42	40.38	44	43.14
Large	25	24.04	16	15.69
Total	104	100.00	102	100.00
49. *Chin prominence*				
Small	55	52.88	46	45.54
Medium	43	41.35	54	53.47
Large	6	5.77	1	.99
Total	104	100.00	101	100.00
50. *Chin type*				
Median	33	32.04	56	56.00
Bilateral	70	67.96	44	44.00
Total	103	100.00	100	100.00
51. *Teeth eruption*				
Complete	73	7[illegible].74	59	72.84
Partial	26	26.26	22	27.16
Total	99	100.00	81	100.00
52. *Teeth bite*				
Under	9	9.18	3	3.70
Edge to edge	29	29.59	16	19.75
Over, small	35	35.71	32	39.51
Over, large	25	25.51	30	37.04
Total	98	99.99	81	100.00
53. *Teeth loss*				
None	24	23.53	15	15.96
1–4	26	25.49	18	19.15
5–8	24	23.53	15	15.96
9–16	12	11.76	13	13.83
More than 17	16	15.69	33	35.11
Total	102	100.00	94	100.01
54. *Teeth wear*				
Absent, small	28	27.45	19	21.11
Medium	27	26.47	20	22.22
Large, very large	47	46.08	51	56.67
Total	102	100.00	90	100.00

TABLE III (Cont.)

	Male		Female	
	N.	%	N.	%
55. *Teeth Caries*				
Absent	5	4.95	5	5.75
1–4	33	32.67	17	19.54
5–8	20	19.80	12	13.79
9–16	13	12.87	15	17.24
More than 17	30	29.70	38	43.68
Total	101	99.99	87	100.00
56. *Teeth shortening*				
Absent	48	64.86	46	76.67
Small	7	9.46	1	1.67
Medium	8	10.81	5	8.33
Large	11	14.86	8	13.33
Total	74	99.99	60	100.00
57. *Teeth crowding*				
Absent	48	47.52	33	40.24
Medium	42	41.58	35	42.68
Large	11	10.89	14	17.07
Total	101	99.99	82	99.99
58. *Malars, frontal projection*				
Absent, small	20	19.23	6	5.94
Medium	62	59.62	37	36.63
Large	22	21.15	58	57.43
Total	104	100.00	101	100.00
59. *Malars, lateral projection*				
Absent	1	.96	...	....
Small	10	9.62	...	....
Medium	55	52.88	43	42.57
Large	37	35.58	58	57.43
Very large	1	.96	...	....
Total	104	100.00	101	100.00
60. *Gonial angles*				
Small	6	5.83	6	6.00
Medium	69	66.99	46	46.00
Large	28	27.18	48	48.00
Total	103	100.00	100	100.00
61. *Ear, helix*				
Very small	12	11.54	2	1.96
Small	36	34.62	6	5.88
Medium	42	40.38	51	50.00
Large	14	13.46	43	42.16
Total	104	100.00	102	100.00

TABLE III (Cont.)

	Male		Female	
	N.	%	N.	%
62. *Ear, Darwin's point*				
Absent	79	77.45	65	65.00
Small	23	22.55	30	30.00
Medium	...	....	5	5.00
Total	102	100.00	100	100.00
63. *Ear, antihelix*				
Small	46	44.23	33	32.35
Medium	47	45.19	56	54.90
Large	11	10.58	13	12.75
Total	104	100.00	102	100.00
64. *Ear, lobe*				
Soldered	43	41.35	27	26.73
Attached	22	21.15	34	33.66
Free	39	37.50	40	39.60
Total	104	100.00	101	99.99
65. *Ear size*				
Small	24	23.08	30	29.41
Medium	56	53.85	54	52.94
Large	24	23.08	18	17.65
Total	104	100.01	102	100.00
66. *Ear protrusion*				
Small	20	19.23	19	18.63
Medium	77	74.04	81	79.41
Large	7	6.73	2	1.96
Total	104	100.00	102	100.00
67. *Temporal fullness*				
Small	14	13.46	27	26.47
Medium	32	30.77	39	38.24
Large	58	55.77	36	35.29
Total	104	100.00	102	100.00
68. *Occipital protrusion*				
Small	38	36.54	32	31.77
Medium	62	59.62	69	67.65
Large	4	3.85	1	.98
Total	104	100.01	102	100.00
69. *Lambdoid flattening*				
Absent	13	12.75	24	23.76
Small	23	22.55	55	54.46
Medium	26	25.49	17	16.83
Large	40	39.22	5	4.95
Total	102	100.01	101	100.00

70. *Occipital flattening* — Not Observed

1: Gillin E-5 (1932-33)1936 SR9 Carib SR9

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TABLE III (Cont.)

	Male N.	Male %	Female N.	Female %
71. *Cranial asymmetry*				
Absent	101	97.11	102	100.00
Left	1	.96	...	....
Right	2	1.92	...	....
Total	104	99.99	102	100.00
72. *Body build*				
Linear	13	12.50	22	21.57
Medium	71	68.27	58	56.86
Lateral	20	19.23	22	21.57
Total	104	100.00	102	100.00

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TABLE IV

ANTHROPOMETRIC MEASUREMENTS OF CENTRAL CARIBS BY SEX

(Constants calculated and tabulated from data presented in *The Central Caribs* by W. C. Farabee, Philadelphia, 1924)

Measurement	Sex	No.	Range	Mean	S.D.	V.
1. Stature	M	68	141–170	157.45 ± .38	4.21 ± .27	2.90 ± .17
(c)	F	28	135–158	145.08 ± .70	5.46 ± .49	3.74 ± .34
2. Biacromial	M	41	31– 39	36.02 ± .16	1.56 ± .12	4.33 ± .32
(c)	F	18	28– 39	34.01 ± .52	3.30 ± .37	9.70 ± 1.09
3. Chest Breadth	M	41	26– 34	28.62 ± .18	1.74 ± .13	6.08 ± .45
(c)	F	Not Observed				
4. Chest Depth	M	40	20– 25	22.20 ± .14	1.22 ± .10	5.95 ± .45
(c)	F	Not Observed				
5. Sitting	M	66	74– 88	81.09 ± .24	2.94 ± .17	3.63 ± .21
Height (c)	F	27	68– 85	75.45 ± .46	3.54 ± .32	4.69 ± .43
6. Head Length	M	71	170–199	182.55 ± .48	6.06 ± .34	3.32 ± .19
(m)	F	28	158–184	172.71 ± .66	5.22 ± .47	3.02 ± .27
7. Head Breadth	M	71	135–158	147.58 ± .36	4.56 ± .26	3.09 ± .17
(m)	F	28	135–155	142.87 ± .58	4.59 ± .41	3.21 ± .29
8. Head Height		Not Observed				
9. Minimum	M	68	91–120	105.27 ± .37	4.50 ± .26	4.27 ± .25
Frontal (m)	F	28	94–117	102.92 ± .53	4.17 ± .38	4.05 ± .36
10. Bizygomatic	M	68	125–149	138.25 ± .41	5.00 ± .29	3.62 ± .21
(m)	F	28	120–139	130.40 ± .54	4.25 ± .38	3.26 ± .29
11. Bigonial	M	68	92–123	105.46 ± .45	5.52 ± .32	5.23 ± .30
(m)	F	28	88–107	100.06 ± .49	3.88 ± .35	3.88 ± .35
12. Total Face	M	21	105–129	115.80 ± .78	5.30 ± .55	4.58 ± .48
Height (m)	F	12	90–114	105.75 ± .80	5.85 ± .80	5.53 ± .76
13. Upper Face	M	68	60– 89	71.70 ± .40	4.90 ± .28	6.83 ± .40
Height (m)	F	28	55– 79	64.50 ± .58	4.55 ± .41	7.05 ± .63
14. Nose Height	M	68	40– 59	48.66 ± .30	3.72 ± .22	7.64 ± .44
(m)	F	28	36– 55	44.78 ± .47	3.72 ± .34	8.31 ± .75
15. Nose Breadth	M	67	31– 48	40.52 ± .26	3.18 ± .18	7.89 ± .46
(m)	F	28	28– 42	35.87 ± .34	2.64 ± .24	7.36 ± .66

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TABLE V

ANTHROPOMETRIC INDICES OF CENTRAL CARIBS BY SEX

(Constants calculated and tabulated from data presented in *The Central Caribs* by W. C. Farabee, Philadelphia, 1924)

Index	Sex	No.	Range	Mean	S.D.	V.
1. Relative Shoulder Br.	M	41*	20– 25	23.08 ± .11	1.02 ± .08	4.42 ± .33
	F	18	20– 25	22.72 ± .18	1.14 ± .13	5.02 ± .56
2. Thoracic	M	40	69– 84	77.50 ± .37	3.44 ± .26	4.44 ± .33
	F	Not Observed				
3. Relative Sitting Height	M	64	48– 55	51.46 ± .13	1.58 ± .09	3.07 ± .18
	F	27	48– 55	52.06 ± .23	1.74 ± .16	3.34 ± .31
4. Cephalic	M	71	74– 88	80.88 ± .14	1.76 ± .10	2.18 ± .12
	F	28	74– 88	82.92 ± .37	2.91 ± .26	3.51 ± .32
5. Cephalo-facial	M	68	82– 99	93.38 ± .24	2.88 ± .17	3.08 ± .18
	F	28	82– 99	91.37 ± .46	3.63 ± .33	3.97 ± .36
6. Zygo-gonial	M	68	69– 86	76.54 ± .28	3.45 ± .28	4.51 ± .26
	F	28	68– 83	76.50 ± .38	2.96 ± .27	3.87 ± .35
7. Total Facial	M	51**	69– 86	78.85 ± .41	4.38 ± .29	5.55 ± .37
	F	12	69– 89	81.25 ± .86	4.44 ± .61	5.46 ± .75
8. Upper Facial	M	68	40– 63	51.95 ± .28	3.45 ± .20	6.64 ± .38
	F	28	43– 57	50.42 ± .44	3.48 ± .31	6.90 ± .62
9. Nasal	M	67	67–102	83.12 ± .59	7.17 ± .42	8.63 ± .50
	F	28	70– 99	81.50 ± .84	6.63 ± .60	8.14 ± .73

* Two additional cases which are given in Farabee's tables of measurements, but not included in his total of indices, were calculated and are included in the total given here.

** Nine indices which are given in Farabee's total, but for which measurements are not given, have been eliminated in the total given here.

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TABLE VI

ANTHROPOMETRIC MEASUREMENTS OF CENTRAL ARAWAKS BY SEX

(Constants calculated and tabulated from data presented in *The Central Arawaks* by W. C. Farabee, Philadephia, 1918)

Measurement	Sex	No.	Range	Mean	S.D.	V.
1. Stature	M	32	150–173	159.16 ± .70	5.88 ± .50	3.69 ± .31
(c)	F	17	144–155	147.64 ± .44	2.70 ± .31	1.83 ± .21
2. Biacromial	M	21	31– 42	36.56 ± .29	1.98 ± .21	5.42 ± .56
(c)	F	7	31– 36	33.71 ± .38	1.50 ± .27	4.45 ± .80
3. Chest	M	21	26– 34	29.43 ± .26	1.74 ± .18	5.91 ± .62
Breadth (c)	F	7	26– 31	28.71 ± .38	1.50 ± .27	5.22 ± .94
4. Chest Depth	M	21	20– 25	22.22 ± .19	1.28 ± .13	5.76 ± .60
(c)	F	Not Observed				
5. Sitting	M	32	74– 91	81.84 ± .41	3.45 ± .29	4.22 ± .36
Height (c)	F	12	71– 82	75.75 ± .48	2.49 ± .34	3.31 ± .46
6. Head Length	M	32	173–196	184.77 ± .52	4.35 ± .37	2.35 ± .20
(m)	F	18	167–184	174.18 ± .72	4.53 ± .51	2.60 ± .29
7. Head	M	32	138–158	148.57 ± .62	5.22 ± .44	3.51 ± .30
Breadth (m)	F	18	132–149	138.16 ± .84	5.28 ± .59	3.82 ± .43
8. Minimum	M	32	91–117	105.68 ± .69	5.76 ± .49	5.45 ± .46
Frontal (m)	F	18	91–120	100.16 ± 1.08	6.78 ± .76	6.77 ± .76
9. Bizygomatic	M	32	125–154	138.90 ± .66	5.55 ± .47	4.00 ± .34
(m)	F	18	120–139	128.65 ± .80	5.00 ± .56	3.89 ± .44
10. Bigonial	M	32	96–119	106.26 ± .63	5.32 ± .45	5.01 ± .42
(m)	F	18	80–107	95.74 ± .80	5.04 ± .57	5.26 ± .59
11. Total Face	M	21	105–134	116.50 ± .93	6.35 ± .66	5.45 ± .57
Height (m)	F	8	95–114	105.75 ± 1.16	4.85 ± .82	4.59 ± .77
12. Upper Face	M	32	60– 84	72.95 ± .55	4.60 ± .39	6.31 ± .53
Height (m)	F	18	55– 74	67.00 ± .52	3.30 ± .37	4.92 ± .55
13. Nose Height	M	32	40– 55	48.38 ± .40	3.36 ± .28	6.94 ± .58
(m)	F	17	36– 55	44.78 ± .64	3.92 ± .45	8.75 ± 1.01
14. Nose	M	32	34– 51	41.00 ± .42	3.54 ± .30	8.63 ± .73
Breadth (m)	F	17	28– 42	35.18 ± .49	3.00 ± .35	8.53 ± .99

TABLE VII

ANTHROPOMETRIC INDICES OF CENTRAL ARAWAKS BY SEX

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(Constants calculated and tabulated from the data presented in *The Central Arawaks* by W. C. Farabee, Philadelphia, 1918)

Index	Sex	No.	Range	Mean	S.D.	V.
1. Relative	M	21	20– 25	23.16 ± .17	1.14 ± .12	4.92 ± .51
Shoulder Br.	F	7	22– 25	23.36 ± .25	1.00 ± .18	4.28 ± .77
2. Thoracic	M	21	69– 84	76.02 ± .59	4.00 ± .42	5.26 ± .55
	F	Not Observed				
3. Relative Sitting Height	M	32	48– 55	51.32 ± .20	1.72 ± .14	3.35 ± .28
	F	12	48– 55	51.84 ± .33	1.70 ± .23	3.28 ± .45
4. Cephalic	M	32	74– 85	80.34 ± .38	3.15 ± .27	3.92 ± .33
	F	18	74– 88	81.18 ± .40	2.55 ± .29	3.14 ± .35
5. Cephalo-facial	M	32	85–106	93.98 ± .53	4.44 ± .37	4.72 ± .40
	F	18	85–100	91.34 ± .49	3.09 ± .35	3.38 ± .38
6. Zygo-gonial	M	32	70– 84	76.70 ± .45	3.75 ± .32	4.89 ± .41
	F	18	66– 83	74.50 ± .66	4.17 ± .36	5.60 ± .63
7. Total Facial	Not Observed					
8. Upper Facial	M	32	46– 63	52.43 ± .44	3.69 ± .31	7.04 ± .59
	F	18	43– 60	52.01 ± .55	3.45 ± .39	6.63 ± .74
9. Nasal	M	32	73–102	84.86 ± .99	8.28 ± .70	9.73 ± .82
	F	17	67– 96	78.95 ± 1.13	6.90 ± .80	8.74 ± 1.01

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TABLE VIII

COEFFICIENTS OF VARIATION OF MEASUREMENTS FOR BARAMA CARIBS, CENTRAL CARIBS, AND CENTRAL ARAWAKS

Measurement	Males Barama	Males Central	Males Arawaks	Females Barama	Females Central	Females Arawaks
Head length	3.04 ± .14	3.32 ± .19	2.35 ± .20	3.48 ± .16	3.02 ± .27	2.60 ± .29
Head breadth	3.49 ± .16	3.09 ± .17	3.51 ± .30	3.10 ± .15	3.21 ± .20	3.82 ± .42
Bizygomatic	3.57 ± .16	3.62 ± .21	4.00 ± .34	4.10 ± .19	3.26 ± .29	3.89 ± .44
Stature	3.88 ± .18	2.99 ± .17	3.69 ± .31	4.18 ± .20	3.74 ± .34	1.83 ± .21
Sitting height	3.93 ± .18	3.63 ± .21	4.22 ± .36	4.84 ± .23	4.69 ± .43	3.31 ± .46
Total face height	4.22 ± .28	4.58 ± .48	5.45 ± .47	5.43 ± .26	5.53 ± .76	4.59 ± .77
Chest depth	4.89 ± .23	5.95 ± .45	5.76 ± .60	....	....	....
Biacromial	5.36 ± .25	4.33 ± .32	5.42 ± .56	9.30 ± .44	9.70 ± 1.09	4.45 ± .80
Minimum frontal	5.68 ± .27	4.27 ± .25	5.45 ± .46	4.36 ± .46	4.05 ± .36	6.77 ± .76
Bigonial	5.71 ± .27	5.23 ± .30	5.01 ± .42	6.16 ± .29	3.88 ± .35	5.26 ± .59
Chest breadth	6.60 ± .31	6.08 ± .45	5.91 ± .62	....	....	....
Nose height	6.96 ± .33	7.64 ± .44	6.94 ± .58	8.29 ± .39	8.31 ± .75	8.75 ± 1.01
Upper face height	6.97 ± .33	6.83 ± .40	6.31 ± .53	7.62 ± .36	7.05 ± .63	4.92 ± .55
Head height	7.10 ± .49	....	....	6.83 ± .43	....	....
Nose breadth	7.86 ± .37	7.89 ± .46	7.63 ± .73	7.13 ± .34	7.36 ± .66	8.53 ± .99
Average	5.15	4.96	5.11	5.77	4.56	4.90

TABLE IX

COEFFICIENTS OF VARIATION OF INDICES FOR BARAMA CARIBS, CENTRAL CARIBS, AND CENTRAL ARAWAKS

Index	Males Barama	Males Central	Males Arawaks	Females Barama	Females Central	Females Arawaks
Cephalo-facial	3.12 ± .15	3.08 ± .18	4.72 ± .40	3.91 ± .18	3.97 ± .30	3.38 ± .38
Relative sitting height	3.26 ± .15	3.07 ± .18	3.35 ± .28	3.47 ± .17	3.34 ± .31	3.28 ± .45
Cephalic	3.85 ± .18	3.18 ± .12	3.92 ± .33	3.37 ± .16	3.51 ± .32	3.92 ± .33
Facial	4.60 ± .22	5.55 ± .27	....	5.10 ± .22	5.46 ± .75	....
Relative shoulder breadth	5.00 ± .24	4.42 ± .33	4.92 ± .51	9.36 ± .45	5.02 ± .56	4.28 ± .77
Zygo-gonial	5.15 ± .24	4.51 ± .26	4.89 ± .41	5.37 ± .24	3.87 ± .35	5.60 ± .63
Thoracic	5.69 ± .27	4.44 ± .33	5.26 ± .55	....	....	....
Upper facial	7.12 ± .32	6.64 ± .28	7.04 ± .59	6.87 ± .33	6.90 ± .62	6.63 ± .74
Nasal	8.79 ± .41	8.14 ± .73	9.73 ± .82	9.64 ± .46	8.14 ± .73	8.74 ± 1.01
Average	5.18	4.67	5.47	6.01	4.40	4.47

TABLE X

DIFFERENCES BETWEEN BARAMA CARIBS AND CENTRAL CARIBS, BARAMA CARIBS AND CENTRAL ARAWAKS, WITH VALUE IN TERMS OF PROBABLE ERROR

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Measurements	Barama Caribs compared with Central Caribs—Male		Barama Caribs compared with Central Arawaks—Male	
	Diff.	x.p.e.	Diff.	x.p.e.
Stature..........	− .63 ± .55	1.14	−2.34 ± .81	2.89
Biacromial......	− .18 ± .20	.90	− .72 ± .32	2.25
Chest breadth....	− .45 ± .22	2.04	−1.26 ± .28	4.50
Chest depth......	−5.42 ± .14	38.71	−5.44 ± .20	27.20
Sitting height....	− .15 ± .32	.47	− .90 ± .46	1.96
Head length......	4.08 ± .61	6.69	1.86 ± .64	2.91
Head breadth....	2.01 ± .49	4.10	1.02 ± .71	1.44
Minimum frontal.	−2.80 ± .53	5.28	−3.21 ± .79	4.06
Bizygomatic.....	− .45 ± .52	.86	−1.10 ± .74	1.49
Bigonial.........	−4.64 ± .59	7.86	−5.44 ± .74	7.35
Total face height.	6.10 ± .85	7.18	5.40 ± .99	5.45
Upper face height	−5.70 ± .50	11.40	−6.95 ± .62	11.21
Nose height.....	5.40 ± .39	13.85	5.68 ± .47	12.08
Nose breadth....	−2.37 ± .33	7.18	−2.85 ± .47	6.06

TABLE XI

DIFFERENCES BETWEEN BARAMA CARIBS AND CENTRAL CARIBS, BARAMA CARIBS AND CENTRAL ARAWAKS, WITH VALUE IN TERMS OF PROBABLE ERROR

Indices	Barama Caribs compared with Central Caribs—Male		Barama Caribs compared with Central Arawaks—Male	
	Diff.	x.p.e.	Diff.	x.p.e.
Rel. shoulder br.	− .28 ± .14	2.00	− .36 ± .20	1.80
Thoracic.........	2.86 ± .48	5.96	4.34 ± .66	6.58
Rel. sitting height	.06 ± .17	.35	.20 ± .22	.91
Cephalic........	− .66 ± .24	2.75	− .12 ± .42	.28
Cephalo-facial....	− 1.23 ± .30	4.10	− 1.83 ± .57	3.21
Zygo-gonial......	− 3.12 ± .37	8.43	− 3.28 ± .51	6.43
Facial...........	9.78 ± .49	19.96	....	....
Upper facial.....	− 4.02 ± .36	11.17	− 4.50 ± .50	9.00
Nasal...........	−12.12 ± .72	16.83	−13.86 ± 1.07	12.95

TABLE XII

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DIFFERENCES BETWEEN BARAMA CARIBS AND CENTRAL CARIBS, BARAMA CARIBS AND CENTRAL ARAWAKS, WITH VALUE IN TERMS OF PROBABLE ERROR

Measurements	Barama Caribs compared with Central Caribs—Females		Barama Caribs compared with Central Arawaks—Females	
	Diff.	x.p.e.	Diff.	x.p.e.
Stature	.70 ± .81	.86	−1.86 ± .60	3.10
Biacromial	−1.44 ± .56	2.57	−1.14 ± .42	2.71
Sitting height	.15 ± .52	.29	− .15 ± .54	.28
Head length	4.71 ± .77	6.12	3.24 ± .83	3.90
Head breadth	1.44 ± .66	2.18	6.15 ± .90	6.83
Minimum frontal	−4.50 ± .60	7.50	−1.74 ± 1.12	1.55
Bizygomatic	.05 ± .65	.08	1.80 ± .88	2.04
Bigonial	−5.24 ± .62	8.45	− .92 ± .89	1.03
Total face height	9.25 ± .90	10.28	9.25 ± 1.23	7.52
Upper face height	−1.50 ± .66	2.27	−4.00 ± .61	6.56
Nose height	6.84 ± .55	12.44	6.84 ± .70	9.77
Nose breadth	−1.38 ± .37	3.73	− .69 ± .52	1.33

TABLE XIII

DIFFERENCES BETWEEN BARAMA CARIBS AND CENTRAL CARIBS, BARAMA CARIBS AND CENTRAL ARAWAKS, WITH VALUE IN TERMS OF PROBABLE ERROR

Indices	Barama Caribs compared with Central Caribs—Females		Barama Caribs compared with Central Arawaks—Females	
	Diff.	x.p.e.	Diff.	x.p.e.
Rel. shoulder br.	− .50 ± .22	2.27	− 1.14 ± .28	4.07
Rel. sitting height	− .14 ± .26	.54	.08 ± .35	.23
Cephalic	− 1.86 ± .41	4.54	− .12 ± .44	.27
Cephalo-facial	− .93 ± .52	1.79	− .90 ± .55	1.64
Zygo-gonial	− 3.26 ± .46	7.09	− 1.26 ± .71	1.77
Facial	7.05 ± .91	7.75	....	....
Upper facial	− 2.40 ± .49	4.90	− 3.99 ± .59	6.76
Nasal	−13.98 ± .94	14.87	−11.43 ± 1.21	9.45

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TABLE XIV

ANTHROPOMETRIC MEASUREMENTS OF BARAMA CARIBS WITH STRAIGHT AND BLACK HAIR ("Pure" Group) BY SEX

Measurement	Sex	No.	Range	Mean	S.D.	V
1. Stature	M	28	141-170	156.25 ± .85	6.69 ± .60	4.28 ± 39
(c)*	F	32	135-158	147.52 ± .71	5.97 ± .50	4.05 ± 34
2. Biacromial	M	28	25- 39	35.42 ± .32	2.49 ± .22	7.03 ± 63
(c)	F	33	22- 39	31.91 ± .36	3.09 ± .26	9.68 ± 60
3. Chest	M	28	23- 31	27.54 ± .18	1.41 ± .13	5.12 ± 16
Breadth (c)	F	Not Observed				
4. Chest Depth	M	28	14- 19	16.64 ± .12	.92 ± .08	5.53 ± 50
(c)	F	Not Observed				
5. Sitting	M	28	74- 88	80.04 ± .40	3.12 ± .28	3.90 ± .35
Height (c)	F	33	68- 88	75.81 ± .41	3.78 ± .31	4.99 ± .11
6. Head Length	M	28	173-199	185.88 ± .74	5.82 ± .52	3.13 ± .28
(m)	F	33	164-193	178.83 ± .69	5.91 ± .49	3.30 ± .27
7. Head	M	28	135-164	149.50 ± .77	6.03 ± .54	4.03 ± .34
Breadth (m)	F	33	135-155	144.82 ± .43	3.69 ± .31	2.55 ± .21
8. Head	M	14	104-147	126.94 ± 1.56	8.64 ± 1.10	6.81 ± .87
Height (m)	F	15	108-131	122.02 ± 1.27	7.28 ± .90	6.41 ± .79
9. Minimum	M	28	91-117	101.75 ± .70	5.46 ± .49	5.37 ± .18
Frontal (m)	F	33	85-105	98.18 ± .52	4.44 ± .37	4.52 ± .38
10. Bizygomatic	M	28	125-149	137.00 ± .57	4.45 ± .40	3.25 ± .29
(m)	F	33	120-144	131.10 ± .12	1.00 ± .08	3.81 ± .32
11. Bigonial	M	28	88-123	100.94 ± .93	7.32 ± .66	7.25 ± .65
(m)	F	33	84-123	97.14 ± .70	6.00 ± .50	6.18 ± .51
12. Total Face	M	28	110-134	119.70 ± .65	5.10 ± .46	4.26 ± .38
Height (m)	F	33	100-129	115.65 ± .72	6.10 ± .51	5.28 ± .44
13. Upper Face	M	28	55- 74	63.60 ± .52	4.05 ± .36	6.37 ± .57
Height (m)	F	33	55- 74	67.45 ± .51	4.35 ± .36	6.97 ± .58
14. Nose Height	M	28	44- 59	52.78 ± .47	3.72 ± .34	7.05 ± .64
(m)	F	33	44- 63	52.18 ± .41	3.52 ± .29	6.75 ± .56
15. Nose	M	28	31- 45	37.46 ± .36	2.79 ± .25	7.45 ± .67
Breadth (m)	F	33	31- 42	34.73 ± .28	2.37 ± .20	6.82 ± .57

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*A "(c)" indicates that the figures are in centimeters; an "(m)" indicates that the figures are in millimeters.

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Table XV

ANTHROPOMETRIC INDICES OF BARAMA CARIBS WITH STRAIGHT AND BLACK HAIR ("Pure" Group) BY SEX

Index	Sex	No.	Range	Mean	S.D.	V.
1. Relative Shoulder Br.	M	28	16– 25	22.50 ± .18	1.42 ± .13	6.31 ± .57
	F	32	14– 25	21.50 ± .25	2.12 ± .18	9.86 ± .83
2. Thoracic	M	28	65– 88	77.34 ± .54	4.24 ± .38	5.48 ± .49
	F	Not Observed				
3. Relative Sitting Height	M	28	48– 55	51.14 ± .19	1.52 ± .14	2.97 ± .27
	F	32	46– 57	51.68 ± .26	2.18 ± .18	4.22 ± .36
4. Cephalic	M	28	71– 88	80.46 ± .42	3.30 ± .30	4.10 ± .37
	F	33	74– 85	80.73 ± .31	2.61 ± .22	3.23 ± .27
5. Length-Height	M	14	55– 81	68.63 ± .90	4.98 ± .63	7.26 ± .92
	F	15	61– 75	67.79 ± .75	4.32 ± .53	6.37 ± .78
6. Breadth-Height	M	14	71– 94	83.37 ± 1.07	5.94 ± .76	7.12 ± .91
	F	15	74– 94	84.00 ± 1.03	5.91 ± .73	7.04 ± .87
7. Fronto-parietal	M	28	63– 74	68.08 ± .37	2.94 ± .26	4.32 ± .39
	F	33	60– 74	67.81 ± .37	3.15 ± .26	4.64 ± .38
8. Cephalo-facial	M	28	85– 96	91.58 ± .32	2.49 ± .22	2.72 ± .24
	F	33	85– 99	91.01 ± .42	3.60 ± .30	3.96 ± .33
9. Zygo-gonial	M	28	63– 86	73.63 ± .60	4.71 ± .42	6.40 ± .58
	F	33	60– 86	74.44 ± .51	4.32 ± .36	5.80 ± .48
10. Fronto-gonial	M	28	90–119	99.70 ± .86	6.75 ± .66	6.77 ± .61
	F	33	80–114	99.40 ± .68	5.80 ± .48	5.84 ± .48
11. Facial	M	28	78–107	87.58 ± .51	3.99 ± .36	4.56 ± .41
	F	33	81– 95	88.27 ± .44	3.72 ± .31	4.21 ± .35
12. Upper Facial	M	28	40– 54	46.46 ± .36	2.79 ± .25	6.00 ± .54
	F	33	43– 54	47.45 ± .28	2.37 ± .20	4.99 ± .41
13. Nasal	M	28	61– 87	72.08 ± .72	5.67 ± .51	7.87 ± .71
	F	33	58– 81	66.92 ± .67	5.70 ± .47	8.52 ± .71
14. Zygo-frontal	M	28	68– 87	74.06 ± .47	3.68 ± .33	4.97 ± .45
	F	33	68– 83	74.58 ± .37	3.16 ± .26	4.24 ± .35

TABLE XVI

MORPHOLOGICAL CHARACTERISTICS OF BARAMA CARIBS WITH STRAIGHT AND BLACK HAIR ("Pure" Group) BY SEX

	Male		Female	
	N.	%	N.	%
1. *Skin color, inner arm*				
Red brown	3	11.11	10	30.30
Light brown	23	85.19	23	69.70
Yellow brown	1	3.70	...	....
Total	27	100.00	33	100.00
2. *Vascularity*				
Absent	25	89.29	31	96.88
Small	3	10.71	1	3.13
Total	28	100.00	32	100.01
3. *Freckles*				
Absent	24	85.71	19	59.38
Small	4	14.29	7	21.88
Medium	...	....	6	18.75
Total	28	100.00	32	100.01
4. *Moles*				
Absent	2	7.14	2	6.06
Few	25	89.29	30	90.91
Many	1	3.57	1	3.03
Total	28	100.00	33	100.00
5. *Hair form*				
Straight	28	100.00	33	100.00
Total	28	100.00	33	100.00
6. *Hair texture*				
Coarse	20	74.07	14	42.42
Medium	7	25.93	19	57.58
Fine	...	....	...	....
Total	27	100.00	33	100.00
7. *Handedness*				
Left	27	96.43	32	100.00
Right	1	3.57	...	....
Total	28	100.00	32	100.00
8. *Hair, head quantity*				
Small	2	7.14	4	12.12
Medium	24	85.71	26	78.79
Much	2	7.14	3	9.09
Total	28	99.99	33	100.00

TABLE XVI (Cont.)

	Male		Female	
	N.	%	N.	%
142 9. *Baldness*				
Absent	27	96.43	32	96.97
Small	...	....	1	3.03
Medium	1	3.57	...	....
Total	28	100.00	33	100.00
10. *Beard, quantity*				
Absent	15	53.57	...	....
Small, very	13	46.43	1	100.00
Total	28	100.00	1	100.00
11. *Body hair*				
Small	26	92.86	9	90.00
Medium	2	7.14	1	10.00
Total	28	100.00	10	100.00
12. *Grayness, head*				
Absent	28	100.00	33	100.00
Small	...	....	...	....
Total	28	100.00	33	100.00
13. *Grayness, beard*				
Absent	26	92.86	1	100.00
Small	2	7.14	...	....
Total	28	100.00	1	100.00
14. *Hair color, head*				
Black	28	100.00	33	100.00
Total	28	100.00	33	100.00
15. *Hair color, face (beard, mustache)*				
Black	8	100.00	1	100.00
Total	8	100.00	1	100.00
16. *Eye color*				
Black	1	7.69	1	5.88
Dark brown	9	69.23	15	88.24
Light brown	3	23.08	1	5.88
Total	13	100.00	17	100.00
17. *Iris*				
Clear	25	89.29	26	78.79
Rayed	3	10.71	7	21.21
Total	28	100.00	33	100.00
18. *Eyefolds, external*				
Absent	8	30.77	12	36.36
Small	6	23.08	9	27.27
Medium	11	42.31	9	27.27
Large	1	3.85	3	9.09
Total	26	100.01	33	99.99

TABLE XVI (Cont.)

	Male		Female	
	N.	%	N.	%
19. *Eyefolds, median*				
Absent	5	17.86	9	27.27
Small	3	10.71	8	24.24
Medium	16	57.14	13	39.39
Large	4	14.29	3	9.09
Total	28	100.00	33	99.99
20. *Eyefolds, internal*				
Absent	5	17.86	11	33.33
Small	8	28.57	10	30.30
Medium	10	35.71	9	27.27
Large	5	17.86	3	9.09
Total	28	100.00	33	99.99
21. *Eye obliquity*				
Absent	6	21.43	5	15.15
Small	12	42.86	6	18.18
Medium	10	35.71	21	63.64
Large	...	....	1	3.03
Total	28	100.00	33	100.00
22. *Eye opening height*				
Small	11	39.29	6	18.18
Medium	17	60.71	23	69.70
Large	...	.....	4	12.12
Total	28	100.00	33	100.00
23. *Eyebrow thickness*				
Small	6	21.43	14	42.42
Medium	20	71.43	17	51.52
Large	2	7.14	2	6.06
Total	28	100.00	33	100.00
24. *Eyebrow concurrency*				
Absent	15	55.56	22	66.67
Small	12	44.44	10	30,30
Medium	...	....	1	3.03
Total	27	100.00	33	100.00
25. *Browridges*				
Absent	2	7.41	6	18.18
Small	12	44.44	16	48.48
Medium	11	40.74	11	33.33
Large	2	7.41	...	....
Total	27	100.00	33	99.99
26. *Forehead height*				
Small	6	21.43	26	78.79
Medium	17	60.71	5	15.15
Large	5	17.86	2	6.06
Total	28	100.00	33	100.00

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TABLE XVI (Cont.)

	Male		Female	
	N.	%	N.	%
27. *Forehead slope*				
Small	7	25.00	18	54.55
Medium	20	71.43	13	39.39
Large	1	3.57	2	6.06
Total	28	100.00	33	100.00
28. *Nasion depression*				
Absent	2	7.14	3	9.09
Very small	...	....	1	3.03
Small	8	28.57	17	51.52
Medium	12	42.86	11	33.33
Large	6	21.43	1	3.03
Total	28	100.00	33	100.00
29. *Nasal root height*				
Small	3	10.71	5	15.63
Medium	23	82.14	24	75.00
Large	2	7.14	3	9.38
Total	28	99.99	32	100.01
30. *Nasal root breadth*				
Small	4	14.29	2	6.67
Medium	21	75.00	23	76.67
Large	3	10.71	5	16.67
Total	28	100.00	30	100.01
31. *Nasal septum*				
Straight, concave	10	37.04	13	39.39
Convex	17	62.96	20	60.61
Total	27	100.00	33	100.00
32. *Nasal bridge height*				
Small	3	10.71	11	33.33
Medium	18	64.29	17	51.52
Large	7	25.00	5	15.15
Total	28	100.00	33	100.00
33. *Nasal bridge breadth*				
Small	1	3.57	...	....
Medium	21	75.00	27	81.82
Large	6	21.43	6	18.18
Total	28	100.00	33	100.00
34. *Nasal profile*				
Concave	8	28.57	14	42.42
Straight	9	32.14	5	15.15
Convex	9	32.14	10	30.30
Concavo-convex	2	7.14	4	12.12
Total	28	99.99	33	99.99

TABLE XVI (Cont.)

	Male		Female	
	N.	%	N.	%
35. *Nasal tip thickness*				
Small	4	15.38	9	27.27
Medium	15	57.69	21	63.64
Large	7	26.92	3	9.09
Total	26	99.99	33	100.00
36. *Tip, inclination*				
Up, medium	3	10.71	3	9.09
Up, small	10	35.71	18	54.55
Down, small	12	42.86	...	....
Down, medium	3	10.71	12	36.36
Total	28	99.99	33	100.00
37. *Nasal wings*				
Compressed	1	3.57	...	....
Medium	15	53.57	27	81.82
Flaring	12	42.86	6	18.18
Total	28	100.00	33	100.00
38. *Nostrils, visibility from front*				
Absent	2	7.14	8	25.00
Small, medium	22	78.57	24	75.00
Large	4	14.29	...	....
Total	28	100.00	32	100.00
39. *Nostrils, lateral visibility*				
Absent	8	28.57	19	57.58
Present	20	71.43	14	42.42
Total	28	100.00	33	100.00
40. *Nostrils, shape*				
Thin	11	39.29	12	36.36
Medium	15	53.57	17	51.52
Round	2	7.14	4	12.12
Total	28	100.00	33	100.00
41. *Nostrils, axes*				
Parallel	2	7.14	2	6.06
Oblique, small	5	17.86	11	33.33
Oblique, large	11	39.29	14	42.42
Transverse	10	35.71	6	18.18
Total	28	100.00	33	99.99
42. *Lips, integumental*				
Small	2	7.41	7	25.00
Medium	13	48.15	12	42.86
Large	12	44.44	9	32.14
Total	27	100.00	28	100.00

TABLE XVI (Cont.)

	Male N.	Male %	Female N.	Female %
43. *Lips, membranous upper*				
Small	2	7.14	4	13.33
Medium	14	50.00	19	63.33
Large	12	42.86	6	20.00
Very large	...	....	1	3.33
Total	28	100.00	30	99.99
44. *Lips, membranous lower*				
Small	2	7.14	4	12.12
Medium	21	75.00	24	72.73
Large	5	17.86	5	15.15
Total	28	100.00	33	100.00
45. *Lip eversion*				
Small	4	14.29	7	21.21
Medium	17	60.71	24	72.73
Large	7	25.00	2	6.06
Total	28	100.00	33	100.00
46. *Lip seam*				
Absent	2	7.41	1	3.03
Small	8	29.63	20	60.61
Medium	10	37.04	6	18.18
Large	7	25.93	6	18.18
Total	27	100.01	33	100.00
47. *Mid-facial prognathism*				
Absent	1	3.57	5	15.15
Small	8	28.57	19	57.58
Medium	16	57.15	6	18.18
Large	3	10.71	3	9.09
Total	28	100.00	33	100.00
48. *Alveolar prognathism*				
Absent	4	14.29	1	3.03
Small	4	14.29	9	27.27
Medium	14	50.00	19	57.58
Large	6	21.43	4	12.12
Total	28	100.01	33	100.00
49. *Chin prominence*				
Small	17	60.71	14	42.42
Medium	10	35.71	19	57.58
Large	1	3.57	...	....
Total	28	99.99	33	100.00
50. *Chin type*				
Median	6	21.43	19	57.58
Bilateral	22	78.57	14	42.42
Total	28	100.00	33	100.00

TABLE XVI (Cont.)

	Male		Female	
	N.	%	N.	%
51. *Teeth eruption*				
Complete	6	21.43	20	68.97
Partial	22	78.57	9	31.03
Total	28	100.00	29	100.00
52. *Teeth bite*				
Under	2	7.69	...	....
Edge to edge	4	15.38	8	28.57
Small, over	9	34.62	12	42.86
Medium, over	11	42.31	8	28.57
Total	26	100.00	28	100.00
53. *Teeth loss*				
None	7	26.92	7	22.58
1–4	7	26.92	5	16.13
5–8	7	26.92	6	19.35
9–16	2	7.69	3	9.68
More than 17	3	11.54	10	32.26
Total	26	99.99	31	100.00
54. *Teeth wear*				
Absent, small	9	34.62	7	21.21
Medium	6	23.08	9	27.27
Large, very large	11	42.31	17	51.52
Total	26	100.01	33	100.00
55. *Teeth caries*				
Absent	3	12.00	1	3.45
1–4	7	28.00	6	20.69
5–8	4	16.00	4	13.79
9–16	5	20.00	3	10.34
More than 17	6	24.00	15	51.72
Total	25	100.00	29	99.99
56. *Teeth shortening*				
Absent	14	70.00	16	80.00
Small	3	15.00	1	5.00
Medium	2	10.00	...	....
Large	1	5.00	3	15.00
Total	20	100.00	20	100.00
57. *Teeth crowding*				
Absent	7	25.93	5	17.86
Medium	15	55.56	19	67.86
Large	5	18.52	4	14.29
Total	27	100.01	28	100.01

TABLE XVI (Cont.)

	Male		Female	
	N.	%	N.	%
58. *Malars, frontal projection*				
Absent, small	5	17.86	...	....
Medium	15	53.57	9	27.27
Large	8	28.57	24	72.73
Total	28	100.00	33	100.00
59. *Malars, lateral projection*				
Absent	...	....	...	....
Small	5	17.86	...	....
Medium	15	53.57	16	48.48
Large	8	28.57	17	51.52
Total	28	100.00	33	100.00
60. *Gonial angles*				
Small	2	7.14	1	3.03
Medium	18	64.29	14	42.42
Large	8	28.57	18	54.55
Total	28	100.00	33	100.00
61. *Ear helix*				
Very small	3	10.71	...	....
Small	11	39.29	2	6.06
Medium	10	35.71	16	48.48
Large	4	14.29	15	45.45
Total	28	100.00	33	99.99
62. *Ear, Darwin's point*				
Absent	18	66.67	23	69.70
Small	9	33.33	7	21.21
Medium	...	....	3	9.09
Total	27	100.00	33	100.00
63. *Ear, antihelix*				
Small	10	35.71	10	30.30
Medium	14	50.00	16	48.48
Large	4	14.29	7	21.21
Total	28	100.00	33	99.99
64. *Ear lobe*				
Soldered	13	46.43	13	39.39
Attached	6	21.43	9	27.27
Free	9	32.14	11	33.33
Total	28	100.00	33	99.99
65. *Ear size*				
Small	5	17.86	10	30.30
Medium	18	64.29	15	45.45
Large	5	17.86	8	24.24
Total	28	100.01	33	99.99

1: Gillin E-5 (1932-33) 1936 SR9 Carib SR9

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TABLE XVI (Cont.)

	Male N.	Male %	Female N.	Female %
66. *Ear protrusion*				
Small	4	14.29	6	18.18
Medium	22	78.57	26	78.79
Large	2	7.14	1	3.03
Total	28	100.00	33	100.00
67. *Temporal fullness*				
Small	4	14.29	5	19.23
Medium	5	17.86	9	34.62
Large	19	67.86	12	46.15
Total	28	100.01	26	100.00
68. *Occipital protrusion*				
Small	11	39.29	10	34.48
Medium	17	60.71	19	65.52
Large	...	....	...	....
Total	28	100.00	29	100.00
69. *Lambdoid flattening*				
Absent	1	3.70	2	6.90
Small	7	25.93	18	62.07
Medium	5	18.52	7	24.14
Large	14	51.85	2	6.90
Total	27	100.00	29	100.01
70. *Occipital flattening* — Not Observed				
71. *Cranial asymmetry*				
Absent	27	96.43	...	....
Right	1	3.57		
Total	28	100.00	..	
72. *Body build*				
Linear	2	7.14	11	33.33
Medium	24	85.71	17	51.52
Lateral	2	7.14	5	15.15
Total	28	99.99	33	100.00

TABLE XVII

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DIFFERENCES OF MEANS AND VALUE IN TERMS OF PROBABLE ERROR BETWEEN THE PURE CARIB GROUP AND CENTRAL CARIBS, THE PURE CARIBS AND CENTRAL ARAWAKS, MALES

Measurements	Differences between Pure Caribs and Central Caribs. Male		Differences between Pure Caribs and Central Arawaks Male	
	Diff.	x.p.e.	Diff.	x.p.e.
Stature	−1.20 ± .93	1.29	−2.91 ± 1.10	2.64
Biacromial	− .60 ± .36	1.67	− .94 ± .44	2.14
Chest breadth	−1.08 ± .25	4.32	−1.89 ± .32	5.91
Chest depth	−5.56 ± .18	30.89	−5.58 ± .22	25.36
Sitting height	−1.05 ± .47	2.23	−1.80 ± .57	3.16
Head length	3.33 ± .88	3.78	1.11 ± .92	1.21
Head breadth	1.92 ± .85	2.26	.93 ± .99	.94
Minimum frontal	−3.52 ± .79	4.46	−3.93 ± .98	4.01
Bizygomatic	−1.25 ± .70	1.79	−1.90 ± .87	2.18
Bigonial	−4.52 ± 1.03	4.39	−5.32 ± 1.12	4.75
Total face height	3.90 ± 1.02	3.82	3.20 ± 1.14	2.81
Upper face height	−8.10 ± .66	12.27	−9.35 ± .75	12.47
Nose height	3.61 ± .56	6.45	4.40 ± .62	7.10
Nose breadth	−3.06 ± .39	7.85	−3.54 ± .50	7.08

TABLE XVIII

DIFFERENCES OF MEANS AND VALUE IN TERMS OF PROBABLE ERROR BETWEEN THE PURE CARIB GROUP AND CENTRAL CARIBS, THE PURE CARIBS AND CENTRAL ARAWAKS, MALES

Indices	Differences between Pure Caribs and Central Caribs. Male		Differences between Pure Caribs and Central Arawaks Male	
	Diff.	x.p.e.	Diff.	x.p.e.
Rel. shoulder br.	− .58 ± .20	2.90	− 1.13 ± .30	3.77
Thoracic	− .16 ± .66	.24	1.32 ± .80	1.65
Rel. sitting height	− .32 ± .22	1.45	− .18 ± .26	.69
Cephalic	− .42 ± .45	.93	.12 ± .57	.21
Cephalo-facial	− 1.80 ± .40	4.50	− 2.40 ± .62	3.87
Zygo-gonial	− 2.91 ± .66	4.41	− 3.07 ± .75	4.09
Facial	8.73 ± .66	13.23	....	....
Upper facial	− 5.49 ± .45	12.20	− 5.97 ± .57	10.47
Nasal	−11.04 ± .93	11.87	−12.78 ± 1.22	10.48

TABLE XIX

DIFFERENCES OF MEANS AND VALUE IN TERMS OF PROBABLE ERROR BETWEEN THE PURE CARIB GROUP AND CENTRAL CARIBS. THE PURE CARIBS AND CENTRAL ARAWAKS, FEMALES

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Measurements	Differences between Pure Caribs and Central Caribs. Female Diff.	x.p.e.	Differences between Pure Caribs and Central Arawaks. Female Diff.	x.p.e.
Stature	2.44 ± 1.00	2.44	− .12 ± .84	.14
Biacromial	−2.10 ± .63	3.33	−1.80 ± .52	3.46
Sitting height	.36 ± .63	.57	.06 ± .65	.09
Head length	7.12 ± .95	7.49	5.65 ± 1.00	5.65
Head breadth	1.95 ± .72	2.71	6.66 ± .94	7.08
Minimum frontal	−4.74 ± .74	6.40	−1.98 ± 1.20	1.65
Bizygomatic	.70 ± .56	1.25	2.45 ± .66	3.71
Bigonial	−2.92 ± .85	3.43	1.40 ± 1.06	1.32
Total face height	9.90 ± 1.08	9.17	9.90 ± 1.36	7.28
Upper face height	3.04 ± .77	3.95	.45 ± .73	.62
Nose height	7.40 ± .62	11.94	7.40 ± .76	9.74
Nose breadth	−1.14 ± .44	2.59	− .45 ± .57	.79

TABLE XX

DIFFERENCES OF MEANS AND VALUE IN TERMS OF PROBABLE ERROR BETWEEN THE PURE CARIB GROUP AND CENTRAL CARIBS, THE PURE CARIBS AND CENTRAL ARAWAKS, FEMALES

Indices	Differences between Pure Caribs and Central Caribs. Female Diff.	x.p.e.	Differences between Pure Caribs and Central Arawaks. Female Diff.	x.p.e.
Rel. shoulder bth.	− 1.23 ± .30	4.07	− 1.86 ± .35	5.31
Rel. sitting height	− .38 ± .35	1.09	− .16 ± .42	.38
Cephalic	− 2.19 ± .48	4.56	− .45 ± .51	.88
Cephalo-facial	− .36 ± .62	.58	− .33 ± .65	.51
Zygo-gonial	− 2.06 ± .63	3.27	− .06 ± .84	.07
Facial	7.02 ± .96	7.31	....	....
Upper facial	− 2.97 ± .52	5.71	− 4.56 ± .62	7.35
Nasal	−14.58 ± 1.07	5.71	−12.03 ± 1.32	9.11

LANGUAGE[1]

194 IN the transliteration of Carib words, unless otherwise noted, vowels are given Italian values and consonants their ordinary English values. In recording, a system of diacritical signs was used to indicate stress and tone, but these are withheld for the present until they can be tested by a properly trained linguist.

VERBS

193 The verbs collected can be classified into four groups on the basis of conjugation.

First Group

to hear

au	moro	seitai	I hear it
(I	it	hear)	
amoro	moro	meitai	you hear it
moko	"	neitai	he hears it
nana	"	neitai	we hear it
amonyaro	"	metatong	you all hear it
mokarung	"	netatong	they hear it

to eat

au	senapui	I eat
amoro	enapui	you eat
moko	enapui	he eats
nana	menapui	we eat
amonyaro	menatong	you all eat
mokarung	nenatong	they eat

to come

au	pui	I come
amoro	mopui	you come
moko	nopui	he comes
nana	nopui	we come
amonyaro	motong	you all come
mokarung	notong	they come

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[1] The linguistic material herewith presented was collected incidentally to the main body of the work. The author is not a trained linguist from the standpoint either of the field or of the library, and sets forth this somewhat scanty collection in the hope that it may be of use to specialists. He feels that any attempt on his part at the present time to compare or analyse the language of the Barama Caribs might confuse rather than illuminate the truth.

to speak

au	angeishi	eruang	suya	I speak English
amoro	"	"	muya	you speak English
moko	"	"	niyang	he speaks English
nana	"	"	niyang	we speak English
amonyaro	"	"	miyatong	you all speak English
mokarung	"	"	niyatong	they speak English

to drink

au	senuri	I drink
amoro	menuri	you drink
moko	nenuri	he drinks
nana	nènuri	we drink
amonyaro	menutong	you all drink
tsenuse	nenutong	they drink

It will be seen that each verb has a stem, and a prefix and a suffix indicating person. A superficial glance at the conjugations will show the following pattern:

	Prefix	Suffix
1st singular	s–	–i
2nd "	m–	–i
3rd "	n–	–i
1st plural	n–	–i
2nd "	m–	–tong
3rd "	n–	–tong

The verb, to speak, follows the prefix, but not the suffix pattern.

Second Group

to dig (cassava)

au	kiedi	shitche	I dig cassava
amoro	"	mitche	you dig cassava
moko	"	kai'	he digs cassava
nana	"	kai'	we dig cassava
amonyaro	"	mishatong	you all dig cassava
mokarung	"	katong	they dig cassava

to grate (cassava)

au	kiedi	shitchu	.. I grate cassava
amoro	"	shiko	.. you grate cassava
moko	"	kui'	.. he grates cassava
nana	"	kui'	.. we grate cassava
amonyaro	"	mishietong	.. you all grate cassava
mokarung	"	kuitong	.. they grate cassava

to kill

au	akuri	hiwe	.. I kill akuri
amoro	"	miye	.. you kill akuri
moko	"	wo'	.. he kills akuri
nana	"	wo'	.. we kill akuri
amonyaro	"	miyotong	.. you all kill akuri
mokarung	"	wotong	.. they kill akuri

These three verbs agree in having no well defined suffix for the third person singular and first person plural.

Third Group

to make (korial)

au	koriara	sekuriya	.. I make korial
amoro	"	ekuriko	.. you make korial
moko	"	ekuriyen	.. he makes korial
nana	"	ekuriyen	.. we make korial
amonyaro	"	ekuritoko	.. you all make korial
mokarung	"	ekuriyatong	.. they make korial

to cook (cassava)

au	arepa	sekeri	.. I cook cassava
amoro	"	ekeshyo	.. you cook cassava
moko	"	ekei	.. he cooks cassava
nana	"	ekei	.. we cook cassava
amonyaro	"	eketoko	.. you all cook cassava
mokarung	"	eketong	.. they cook cassava

to spin (cotton)

au	maru	sepoiye	.. I spin cotton
amoro	“	epoishe	.. you spin cotton
moko	“	epoiyen	.. he spins cotton
nana		epoiyen	.. we spin cotton
amonyaro	“	epoitoko	.. you all spin cotton
mokarung	“	epoiyatong	.. they spin cotton

The above three verbs agree in having no prefixes to the stem, except *s* in the first person singular.

Fourth Group

In the fourth group are included those verbs collected which seem to have irregular conjugations.

to have

The verb, to have, makes no changes in the course of conjugation except in the use of pronouns.

au	moro	mundo	ma	.. I have it
(I	it	have)		
amoro	moro	mundo	ma	.. you have it
moko	“	“	“	.. he has it
nana	“	“	“	.. we have it
amonyaro	“	“	“	.. you all have it
mokarung	“	“	“	.. they have it

to be

The verb, to be, also makes no changes in the course of conjugation.

au	edo	tamunewa	.. I am white
(I	am	white)	
amoro	edo	tamunewa	.. you are white
moko	“	“	.. he is white
nana	“	“	.. we are white
amonyaro	“	tamunemando	.. you all are white
mokarung	“	tamunemando	.. they are white

to make (cassava squeezer)

au	matapi	tchishasa	.. I make cassava squeezer
amoro	"	shiyako	.. you make cassava squeezer
moko	"	tchiyasong	.. he makes cassava squeezer
nana	"	tchiyasong	.. we all make cassava squeezer
amonyaro	"	shiyatoko	.. you all make cassava squeezer
mokarung	"	tchiyasatong	.. they make cassava squeezer

Present tense, negative

tamune watuwa .. I am not white
amoro tamune watema .. you are not white
moko edo tamune wateni .. he is not white
nana tamune watema .. we are not white
amonyaro tamune watemando .. you all are not white
mokarung tamune watemando .. they are not white
tesene wato? .. is it not true

to chop (tree)

	wiwi	tishakai	.. I chop tree
amoro	"	shiakao	.. you chop tree
moko	"	sakanu	.. he chops tree
nana	"	sakanu	.. we chop tree
amonyaro	"	shakatong	.. you all chop tree
mokarung	"	sakatong	.. they chop tree

to hunt

watayori (au-ata-ori)		.. I hunt
amoro	ataroko	.. you hunt
moko	atari	.. he hunts
nana	natari	.. we hunt
amonyaro	atarotoko	.. you all hunt
mokarung	natarotong	.. they hunt

to love

au shyanomai	.. I love her
amoro mishyanoami	.. you love her
moko kinshanomano	.. he loves her
nana kinshanomano	.. we love her
amonyaro mishanomatong	.. you all love her
mokarung kinishanomatong	.. they love her

to beat (drum)

	sambura	shimurikai	.. I beat drum
amoro	"	amurikaka	.. you beat drum
moko	"	amurikang	.. he beats drum
nana	"	amurikang	.. we beat drum
amonyaro	"	amurikatong	.. you all beat drum
mokarung	"	amurikatong	.. they beat drum

to sing

au	waritai	.. I sing
amoro	waritako	.. you sing
moko	niaritai	.. he sings
nana	niaritai	.. we sing
amonyaro	awaritatong	.. you all sing
mokarung	niaritatong	.. they sing

Future tense

to come

wo take		nari	.. I will come
mo take		"	.. you will come
konotang		"	.. he will come
nana	nari	konotang	.. we will come
amonyaro	"	motatong	.. you all will come
mokarung	"	konotong	.. they will come

(*Negative*)

wo	pupa	witake	.. I will not come
"	"	nari mitake	.. you will not come
"	"	" kiniteng	.. he will not come
"	"	" nana kiniteng	.. we will not come
amonyaro	penyari	wopuga mitatong	.. you will not come
mokarung	wopupa	kinikatong	.. they will not come

to beat drum

penyari	sambura	shamurikai	.. I will beat drum
amoro penyari	amurikai	sambura	.. you will beat drum
moko "	kini murikatong	"	.. he will beat drum
nana "	kini murikatong	"	.. we will beat drum
amonyaro "	amurikatatong	"	.. you will beat drum
mokarung "	kini amurikatatong	"	.. they will beat drum

to kill

iota kini penyari .. I will kill
miotake penyari .. you will kill
kini wotang penyari .. he will kill
kini yotang penya nana .. we will kill
miotatong penyari .. you all will kill
mokarung penyari kini wotang .. they will kill

Past tense

au moro shimurikai sambura kunyaro .. I did beat drum yesterday
(I it did beat drum yesterday)
amoroni moro murikai .. I did beat it
mokoni moro kini murikong .. he did beat drum yesterday
nanani moro imurikai .. we did beat drum yesterday
amonyarono moro imurikatong .. you all did beat drum yesterday
mokarungno moro kinimurikatong .. they did beat drum yesterday

Conditional tense

wo pusiata totake .. I would come if I could
amoro penyari motaki awopusiata .. you would come if you could
au penyari shimurikatak sambura .. I would knock sambura
I would beat drum
amoro penyari amurikatak sambura .. you would beat drum
moko penyari kini murikatak sambura .. he would beat drum
nana penyari kini murikatak sambura .. we would beat drum
amonyaro penyari amurikatong sambura .. you all would beat drum
mokarung penyari amurikatong sambura .. they would beat drum

Miscellaneous Verbal Phrases

au onyambai .. I make sport
amoro onyambako .. you make sport
moko nonyambai .. he makes sport
au womiking sheshawi .. I wash clothes
wekupipya (contraction of au ekupipya) .. I bathe
mokarung nekupityang .. they bathe
wawnuki (contraction of au anuki) .. I sleep
awa nisaba .. I am going to sleep
upa moro nomuki? .. did you sleep well?
au tandu powa .. I am sitting down
amoro tandu powa .. you are sitting down

moko atandu powa .. he is sitting down
watandy more .. I am going to sit down
moropo atandu moko .. sit down!
moko natandu more .. he is going to sit down
weyu tanongena ishyo mainye? .. is the sun shining?
moro edo tapurukeng .. that is wet
moro edo taipitureng .. that is dry

TEXT

Following is the native text of one version of the myth "Bush Spirits and Supreme Beings," which will be found in the collection of myths in a preceding section. 539

amoi we' inpwembo itu akuru
once bush devil spirit
paparoro karinyago komapopumbo
father men sent for call
iya paparori tuwatane nose
to him father come been
inye iyinymbo awin amo
to him from them one of them
iya tapawye tupa'me takase
to him hold he make
pa iya. diyamo medo tuweda
like him. They then they turn
mane mepa. morumbo winyo
back go he calls from that place
tuko mapone edopa iya.
send again to him.
upuparo tuyayinye yoke.
they do not come then.
ka'ne narese aiononamwi.
all right I will eat you.
witateko idio edo yumbo
since then he is vexed
tuware kopoke. karinye
men
koinpokoma.
he troubles.

Numerals

192 one — awin
two — oko
802 three — awrua
four — okobami
five — onyetoni
six — awin yoepmwepo
seven — oko yoepmwepo
eight — awrua yoepmwepo
nine — okobami yoepmwepo
ten — onyambatoro, or, okororonya
eleven — onyambatoro koponaka awin
(ten over one)
twelve — onyambatoro koponaka oko
thirteen — onyambatoro koponaka awrua
fourteen — onyambatoro koponaka okobami
fifteen — atoninye
sixteen — awiepmwepo kopanaka onyambatoro
seventeen — okoepmwepo kopanaka onyambatoro
eighteen — awruepmwepo kopanaka onyambatoro
nineteen — okobami yoepmwepo kopanaka onyambatoro
twenty — awin karinye (one man)
thirty — awin karinye koponaka onyambatoro
(one man more ten)
forty — oko karinye (two men)
fifty — oko karinye kopanaka onyambatoro
one hundred — onyetoni karinye (five men)

Note: Counting is done on the fingers. Most individuals can count by units to ten, then by fives, tens, or twenties.

VOCABULARY

abdomen — poeete
absent, not there — wabai
all right — inari
animal — tonomwi
anklet: beads — sepuru
arm — yenari
arrow — puliwa
axe — wuwu
ant bear — tamanua
a kawai — tiotoko
acquero seed — tukuma'u
armlets — apotano (fiber)
  yapesepuru (beads)
arrow: puliwa
  head — piaturu
  socket wood — epuru
  binding of head — epu miotopo
  shaft — mapuru
    arrow plant (a reed) — mapuru epui
  feathering — puliwa epawriri
  feather binding — epawriri miotopo
  knock — yesenadano
  knock binding — ityo miotopo
  harpoon head string — towoto poyamoti
Arrow: plain point — anseta aranseta
  one-side barb — tokosi
  bird arrow — mulu mulu
  double barb — taoto
  harpoon — pinya

babracote (drying rack) — aripapone
baboon tree — aramata
back — 'nga'naru (part of body)
back — yesepumuru winyono
bad — ya'ame
  wekupi
bad girl (sexually) — oti anobwipo
bamboo — kwamata
banana: general — paruru
banana: blackish variety — mekorumyo
banana: greenish ("Cayenne" "apple" b.) — ipitakamapo
banana: large red variety — kyasakore
banana: large yellow variety — idinyuku
banana: large yellow late variety — wepyunsokai
banana: medium sized red variety — pomede
banana: short green variety — mutuku
banana: small red variety — mari pyemyu
banana: small sour red ("sour fig") — sariarya
bead: necklace — yenekari
bench: aponano
bete rouge (small red insect) — kumaninoku
big — apoto
bina (charm for hunting) — tur[illegible]arara
bird — tenoro
bitter tali (vine leaf used to cause sweating) — pakamu maituru
black — tukuaiye
black yarau fish — muturu
blue — tukuru
board — paranga
boss — iopotari
bottle — parteri
bottom side people (Caribs living near Barama mouth) — shenuwin yonoko
bow — urapa
  bow head — apono
  " foot — opin yoni natari
  " string — arapa amoti
  " strengthening cord — shyatum amoti
boy — wukuri
breath — yoremaru
brother — kami

bunia bird — konoto
to burn — kini tcherosan
bush (jungle) — ityu
bush crab — kawana
bush cow — maipuri (tapir)
bush rat — mumpome

cadouri, Spanish (a bird) — pipishi
Carib — karinye
cassava: baked — arepa
bread — arepai keipyo
cassava juice — eshuru
cassava: root — kiedi
cassava squeezer (or press) — matapi
cassava starch — sipipya
cassava starch: baked — sipipyakeipyo — mimyi
cassava starch: dry, baked — s(h)ipipyo anorupo ekeipyo
cassava trough — kumong
cassiri pot — tukuwari
cassiri shed, for barrel — kanu'eti
cassarip — cashidipyo
chest — ipopuru
chicken — korokoto
chicken hawk — towatowa
chigger — shitcho
chin — iekusari
cigarette wrapper (inside bark of tree of same name) — kakareli
clay — arinyo
cold — tukominye
come! — okone
counter wood — paripyo
couvade — tumene mano
corial (canoe) — kuriara
corial bench — aponano (same as land bench)
corial gunwale — eshipiri
corn — awashi
corn bird — awashiwini
cotton — maru
crab, river, small — wararu
crow, big — anwana
crow, small — rumu
curabeti (small red ant) — awata'u
cushee ant, large — komarko (large cushee)
cushee ant, small — akeke
cutlass (machete) — supara
to dance — wano

daughter — yemwidye
day — shuritanoro
deer (general) — yakarawa
deer, tibisiri (brown) — kariako
deer bina — yakara watu arari
dog — yawari
doll — myakonbokupo
dream — wawnitipo
dress — tapokeng
(with sleeves) — omapori
drink, to — tanumwi
drum — sambura
drum player — sambura morakani
dry — taipit(y)ure
dull — yepa

earth — nono
earthworm, large — kowi
easy — takure
very easy — potui kenedote
eight — awrua yoepmwepo
elbow — yaporu'enaru
eleven — 'nyambatoro koponaka awin
eye — ienora
eyebrow — i(y)e mesurukuru
falls (any kind) — marari

falls, big — tyoti
far — mo'e
fat (adj.) — tikake
father — papa
feather — epawripyo
field (cultivated for cassava and other food plants) — mainya
fifteen — atōn inye
fillet (of cotton) — puripuri
fine (size) — aitchisho
finger — yenashitiri
finished — jumboro, idiumboro, yumboro

firefly, big — puyu
fish, gen. — oato, woto
fish, blinker — kewede' yuma
fish, hoplias macrophthalmns — simara
fish, huri — patakai
fish, morocot (? myletespacu) — kasama
fish (? waru) (? hypostoma, Doras) — bura burari
flagolet — epo
flat — tipipiyake
flour — porowa
foot — isedi (part of body)
foot — pupuru
five — onye toni
fourteen — nyamkatoro koponaka okobami
frog: rain — konowaru
river — krapo
small, tree — pakuku
front — pietowinyo

ghosts (spirits of dead people) — yumbupa'akasa
girdle: women
— wori (girl) akunde (girdle)
bead girdle — kasura
good — upa
good-bye — wisaroba
to grate (as with cassava) — kini tchuyan
grave — munano
green — tekeneye
greetings — upararobo
gun — arakabusa

hair (general) — (y)usedi
hair, curly — mari midi
hair, grey — tumu
hammock — mimyoku
hammock, fiber (interior fiber of young leaf) — tibisiri
hand — yeparari
hard, difficult — towopi
hat — omari
he — moko
head — upupo
heart — turupo
heart spirit — turupo wariaru
heel — itoburu
high — nuse
hoe — samba
hog, large — ponjo
small — abuya
hoop and stick game — onamba toba tonomi
house — owto
sleeping thing — wawnitopo (used synonymously w. house)
upright post — wakopu
tie beam — tchurapa
longitudinal stringer — apopono
rafter — iararu
longitudinal stringer along bottom of thatch under eaves — sariapone
ridge pole — deatulutano
roof — dioneru
longitudinal pole down center under ridge pole at level of the eaves — otondano
cross beams on which articles are stored — sura
fall back — asaru
cross beam under eaves in fall back — asaru apone
ridge pole upright supports — otoreturu
upright from which matapi hangs — matapi (y)edi waka puru
crossbeam which supports matapi — matapi (y)edi
house, long — apototo
house, small — miemboto
house (fallback on small house) — asepote
house, steep gabled — nosenoto
how do you do? — amoruraba
how do you do that? — atono me mora warame'i
humming bird — takushi
hungry, I am — kumuyapa

husband — unya

I — au
it — yemididye

jagdman ant — sulu

knee — yekunaru
knife — mariya
leaf — tchuruo'i
  — aru
leg — (y)ube'iti
ligature — tcheseru
  — sepuru (worn by women only)
lightening — kapeta
lime (fruit) — idimyona
lip — yesibiri
little — mimboko
locust gum — shimidie epku
loin-cloth — wokuru kamushara
  " " cotton fringe — sesururu, epururu
  applique — piepaitu, pie kono
  girdle — akondu (his girdle), kondenano (anyone's girdle)
loin-cloth (women) — wawrish shamisharu tupuru
long — mashime
  — mashipe
  — mashipye
low — nomoshishe

maize — awashi
  red maize — ku wata
  white maize — tamung awashi
man — karinye
maybe — dyoraro yedu
medicine man — piaiyen
medicine lodge (consultation room) — toakai
menstruating woman — no'mono
menstruation: first — ama'sembo
milk — pakamana tipu
mole (on face) — korono
moon — nunong
monkey — yarakaru
  " howling — arata
  " black — witire
monkey howling — cipula
mother — tata (my mother)
  — ananu (your mother)
(one) month — (awin) yoho
mountain — wapi
moustache — bosurukuru
mouth — 'ndari

near — tsenge
neck — iesapumuldi
necklace — kapupu
night — shokonoru
nine — oko bami yoep mwepo
no! — warote
nose — i(y)enatari

old man — tambarari
old people — benaton (lit. "long time")
old woman — napoko
one — awin
orange — aranka

packstrap (certain tree) — maho
paddle — apokutye
paddle wood — yuroto
pai wari — pai a waru
papaia — puku pai ya
parrot — kurewako
parson — tamuwe
penis — arokuru
pepper — pawmwi
  " big round one — poroporo
  " small — k'awanamu
  " very small red — sidimya
  " long thin red — yanakatu
pimpler palm seed — parepi
pineapple — nana
plantain, black tree — aratan
plantain, general — parurune
plantain, leaf — paruru rari
plantain, long variety — taposa
plantain, wild — pariri
plate — parapi
pork — paka
pot — tumaiene
pottery, to make — tomai ene shishasha

powis ("bush turkey") — woko
purple — toko yure

rain — konopo
ready:
  Are you ready? — ha'embo
  I am ready — ka'mago
red — tapide
rice — arishi
rotten wood worm — kamburu
round — tatorishe

salt fish — pakiria'u
sand — sakow
to scrape (or peal, as with cassava root) — ipityali
seed pod plant — kurewa
settlement — witopo
seven — oko yoepmwepo
to have sex intercourse — wanino
shadow (spirit in the shadow) — (y)akaru
shaman — piaiyen
sharp (edged) — tieke
sharp (pointed) — tuposhishe
shell — pipyo
she — moko
  her (objective) ano
shoes — apato
short — puma, tsanime
shoulder — motari
sick — anuku
silk cottontree — komaka
sister — yenatu, wa'a
six (one over five) — awinyoepmwepo
skin — yupipyo
skirt (hung from neck over the breasts) — saiya
sleep — wawnikupo
small marudi — marasi
snail — kuwe
snake — akoyu
snake, camudi — iye
snake, large camudi — iyoe
sometime — amumbai ako
son — imuru
spindle — kwitye
spirit — akuru (suffix, prefix, etc.)
  as: ground spirit — momoakuru
  creek spirit — ako yumu
  hill spirit — wopwi akuru
  river spirit — tonaka noko
spirit. field — piuku
to sport (or spree) — onyambami
squash ("punkin") — wayomo
  round squash — apotono wayoma
  long thin squash — takunshishe wayoma
star — siditcho
stilts — sambai epu
stomach — yuwembo
sun — weyu
sweet potato — napi

taste — tapuru
ten — okororonya ("both hands"). 'nyambatoro
they — mokarung
thin — tapore
thing — oti (object)
  what is that thing? — otimeri moro
thirteen — 'nyambatoro koponaka awrua
this week — edonsondakai(y)ako
three — awrua
throat — i(y)nakoruru
thumb — yenarari yuma
thunder — konomedu
tiger — kashushi
tobacco — tamu
today — erome
toe — pupuru shitiri
tomorrow — korofo
tongue — nuru
tonight — haidyekoko
tooth — yedi
top (toy) — kuma epipo
toucan — kwai king
tray — matutu
tree — orua, wiwi
tree squirrel — keshipuru

tree-worm, red and white about 4" long (bina) — aruko
turtle — wai(y)amu
tura seed — patawa
turu worm (lives in heart of turu tree, fried and eaten by Caribs) — sitiri
twelve — 'nyambatoro koponaka oko (ten over two)
twenty — no ingai nye
twins — aisemonoshi
two — oko

violin — araweda
virgin — miandabo

warakabra bird (trumpet bird) — akami
warm — ashimbye
water — tona
we — nana
well:
  I am well — yupa sorobo
  I am not well — yupa watyuwa
well — upaina tarepuri
wet — tepukure
what else? — awtilopa
when? — ni(y)ako
where is that? — oe medu morone
white — tamune
why? — otononi
woman — wori
wood — yamonapo
wood ant — okorotawbu
woodpecker — wetu
woodskin (bark) — wepipyu
wristlet, beads — yame kunde

yam — napui
year — siditcho ("star") Carib year (reckoned by seven stars; when they are down at Christmas the year is ended)
yellow — tekedeke
yes — tawane
yesterday — kwinaro
you (pl.) — amonyaro
you (sing.) — amoro

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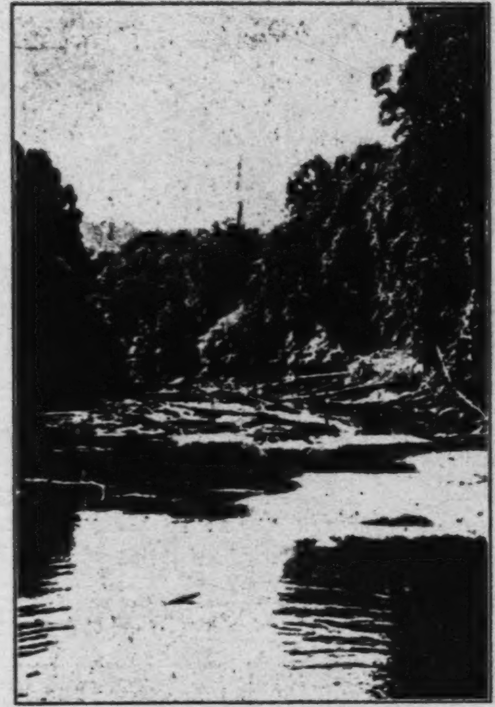
a A portion of the Barama River during the dry season, showing sandbanks and fallen trees which impede navigation.

b, Scene on the Barama River below Bale's. Tidal movements affect the height of the river along the banks of the Barama.

[End plate 1]

[End plate 2]



a, View of the Barama River with water at medium height, navigable with some difficulty by small canoes.

b, A typical riverside camp of the expedition, giving an idea of the comparative height of the forest along the banks of the Barama.

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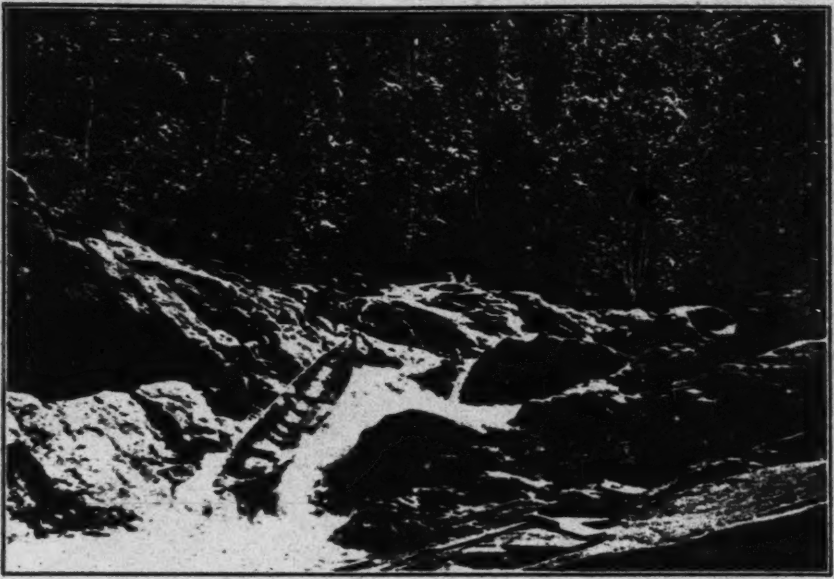

a. A portion of the "Great Falls" of the Barama at Towakaima, an impediment to navigation which has tended to isolate the settlements located above it.

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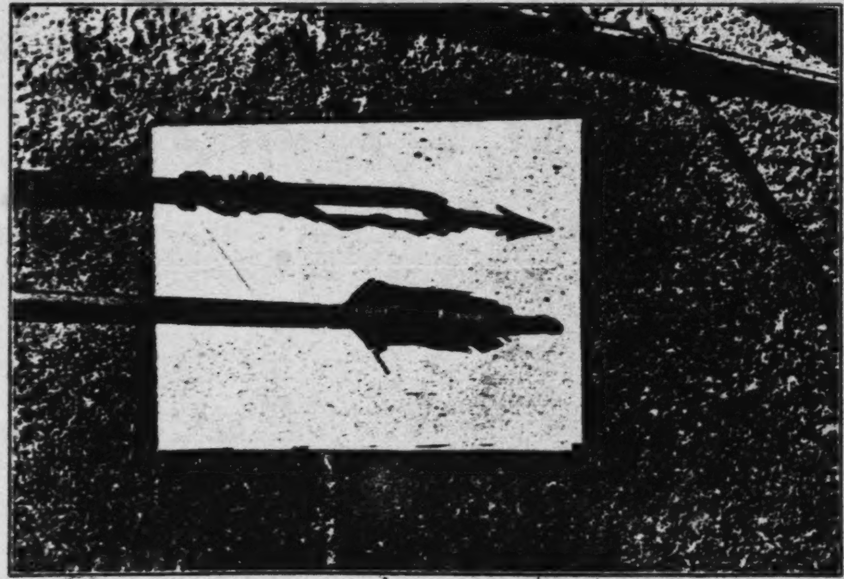
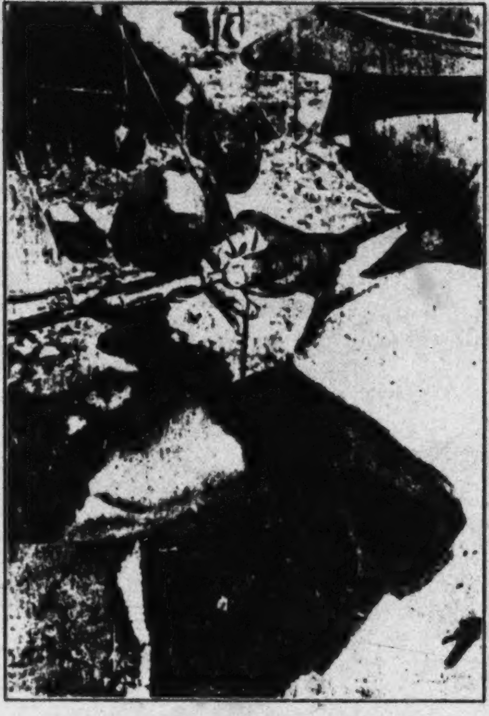


b. Feathering and tip of a harpoon arrow.

[end plate 3]

[End plate 4]



a, Close-up view showing arrow release in use by Barama Carib.

b, The old and the new in Carib hunting — bow-and-arrows and shotgun.

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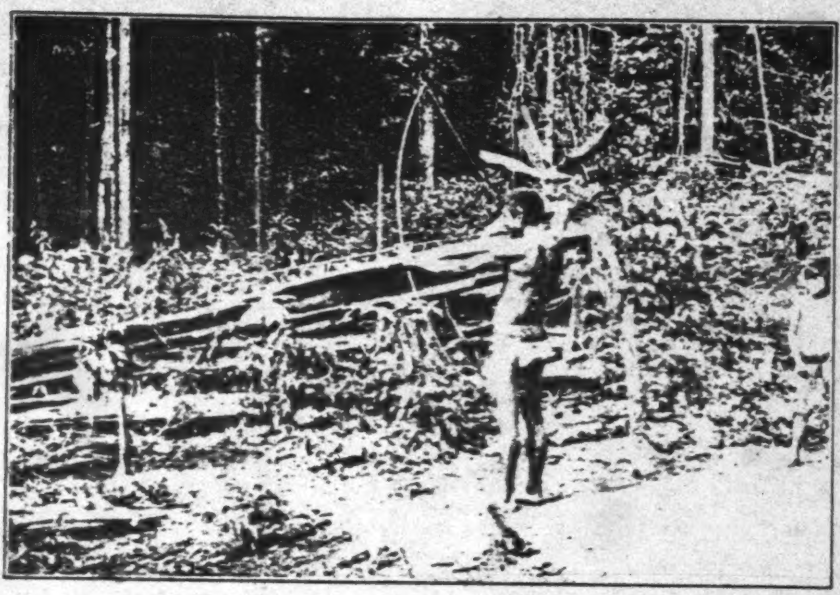

a, A man using bow and arrow. Note the typically raised position of the right elbow.

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b, A newly cut cassava field. The brush has been removed, but the fallen tree trunks have not yet been burned.

[end plate 5]

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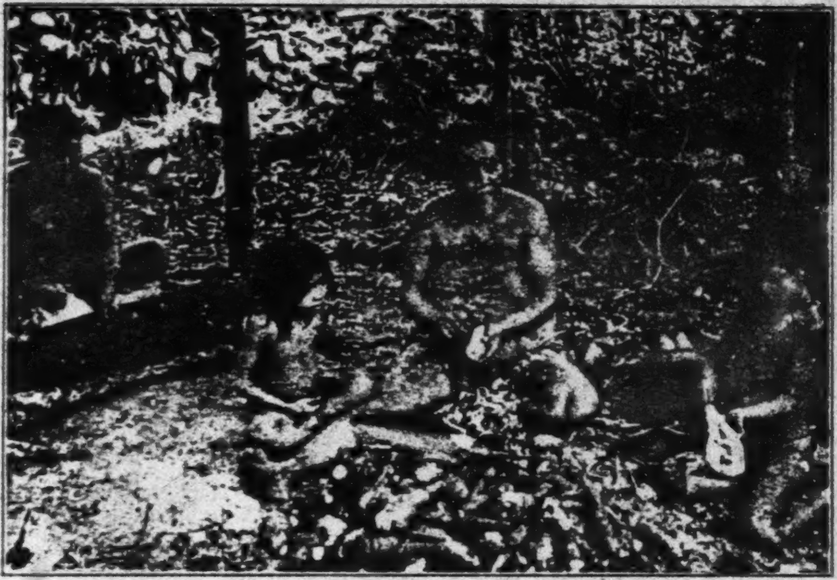
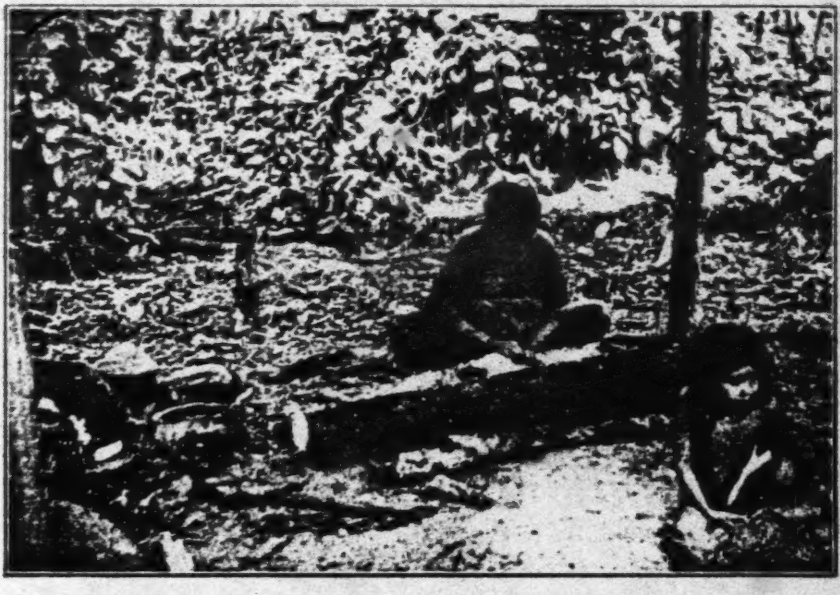


a, Removing the skin from the cassava root by scraping with an old cutlass.

5



b, Grating the cleaned cassava root in order to reduce it to a mash preparatory to extracting the poisonous juice.

[End plate 6]

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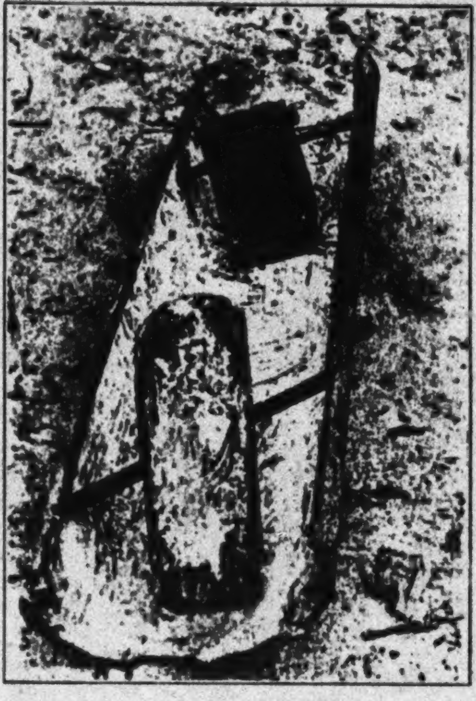
[End plate 7]

a, Washing the cassava root after it has been scraped.



b, Apparatus used for grating cassava. In the foreground, resting against one of the braces of the bark trough is the wooden base of the grater; behind it is the perforated tin grater which fits over the base.

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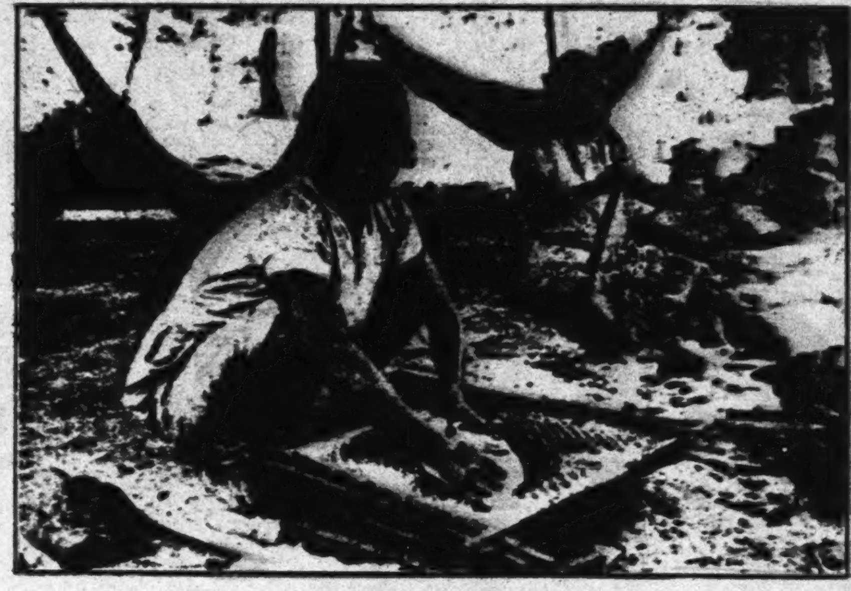

a. Breaking up a cylinder of cassava meal on the sifter, preparatory to sifting out the fine meal for baking bread.

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b. Mill or juice-extractor. The canes are laid one by one on the table or projecting piece of wood under the lever. The juice flows down to the point where it falls into a pot on the ground.

[End plate 8]

[End plate 9]

a, Three matapi, basketry tubes used for extracting the poisonous juice from the grated cassava.

b, Women's costumes typical of settlements removed from supply of trade cloth.

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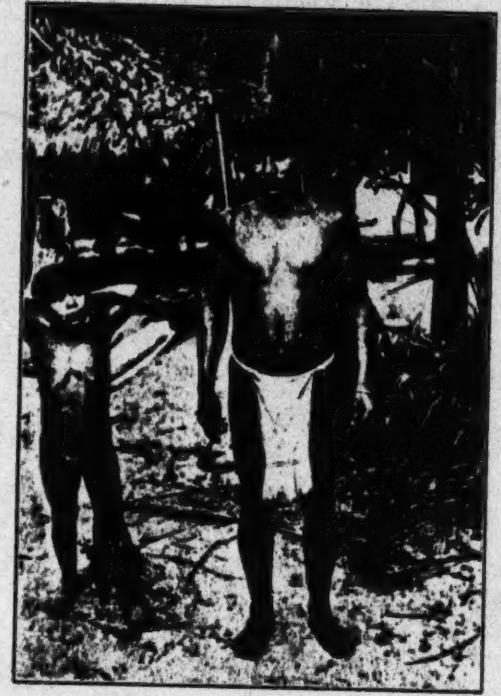
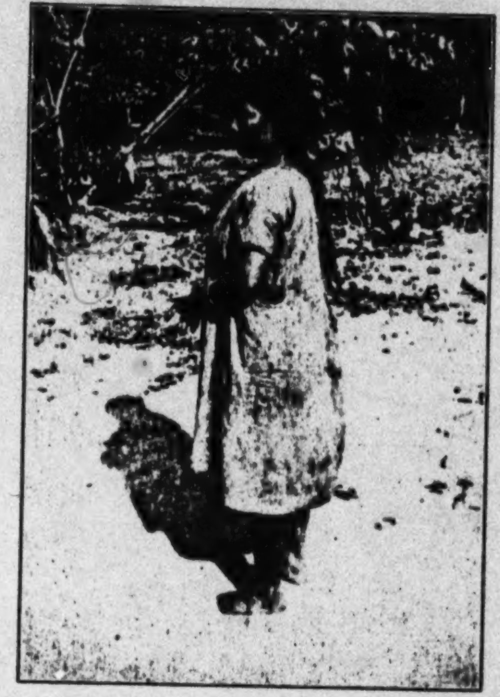
[End plate 10]



a, Typical costume of boy and man respectively throughout the Barama area.



b, The most usual type of homemade dress owned by women who can obtain trade cloth. Photograph also shows a favorite manner of arranging the hair.

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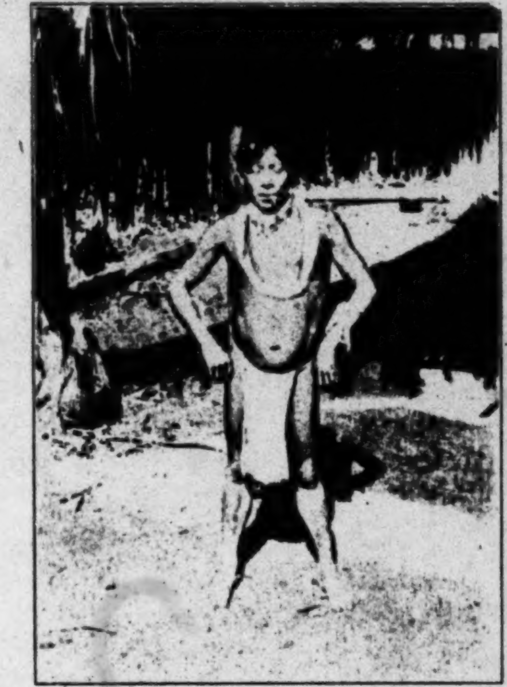
[End plate 11]

a, Appearance of a Carib man who works for one of the trading posts. This type of costume is unusual on the Barama.

b, The headman of Sawari, Miller, with his piai rattle. Note forehead covered with white powis-down and fillet of cotton on head.

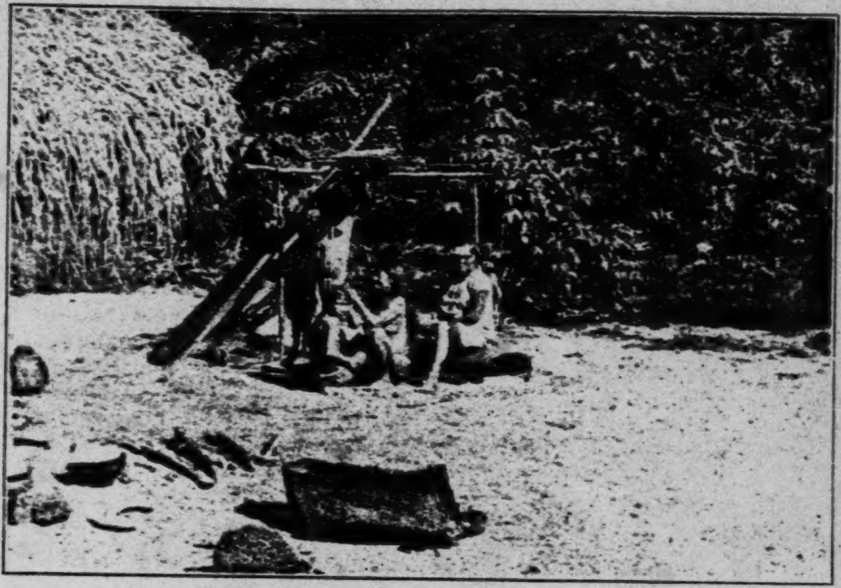
[End plate 12]



a, Man wearing personal ornaments at a drinking spree. Note necklace of tiger teeth, wristlet with pendent tassel, imported handkerchief.

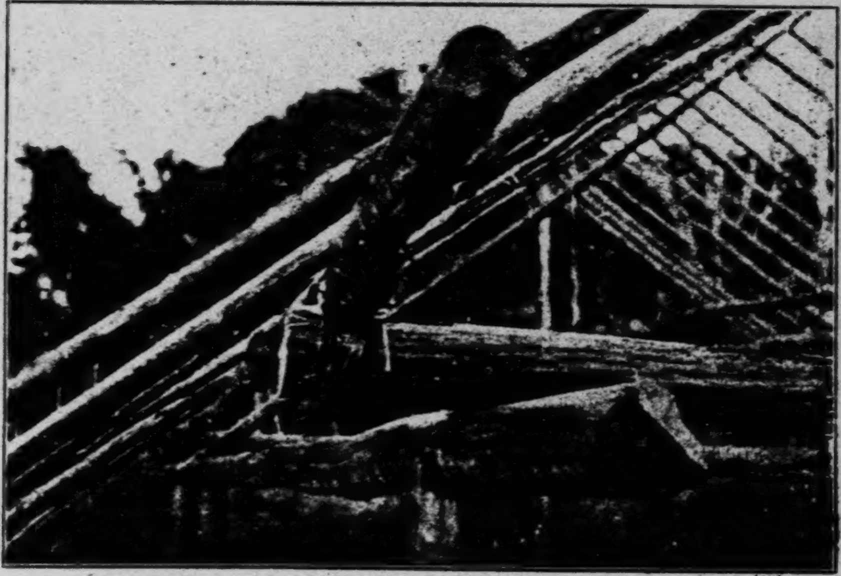
b, Back view of the man shown in a, showing pendent tassel of cotton tufts and seeds attached to necklace of teeth.

515
417



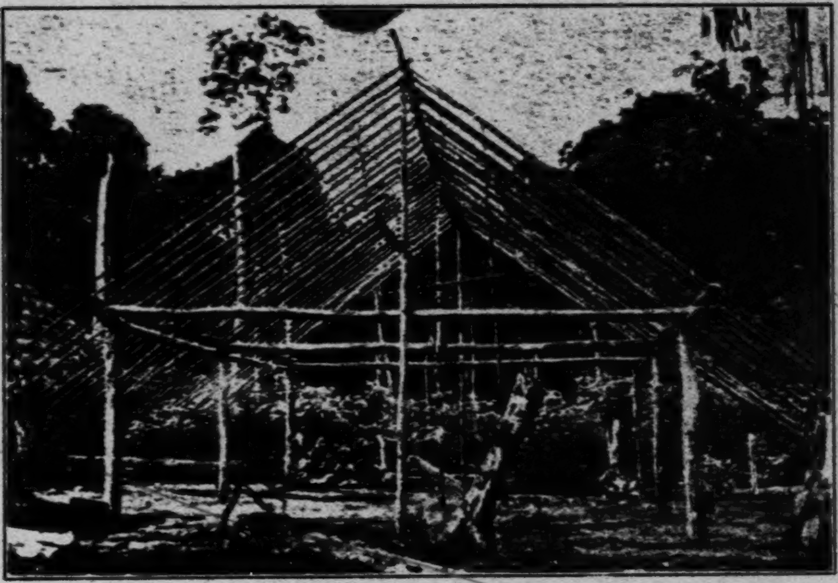
a, A group of women delousing each other. The forehead of the woman sitting on the cassava trough at the right is decorated with a tuft of white powis-down. The frame work is a rack for drying meat and other foods in the sun.

335

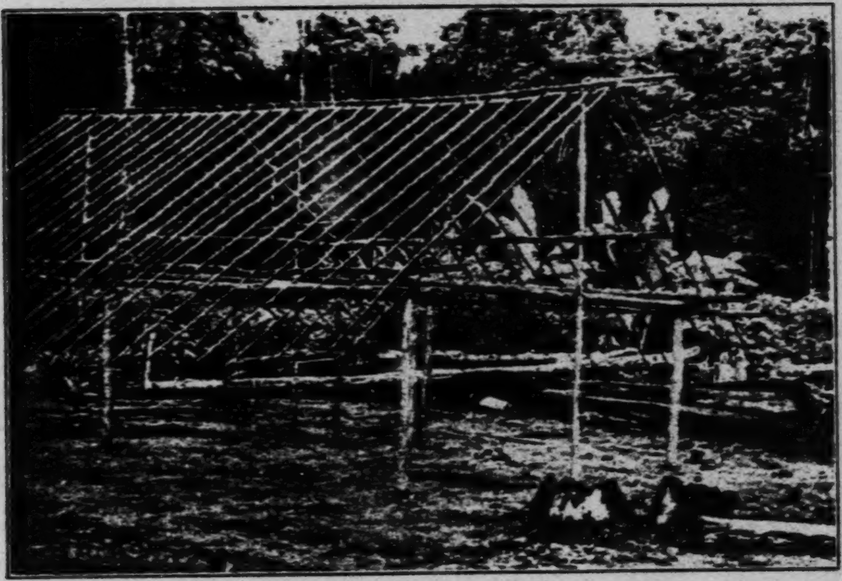


b, Details of house construction. Note forked or flanged top of pillar on which rest the runner, tie-beam, and wall plate (longitudinal beam supporting rafters).

[End plate 13]



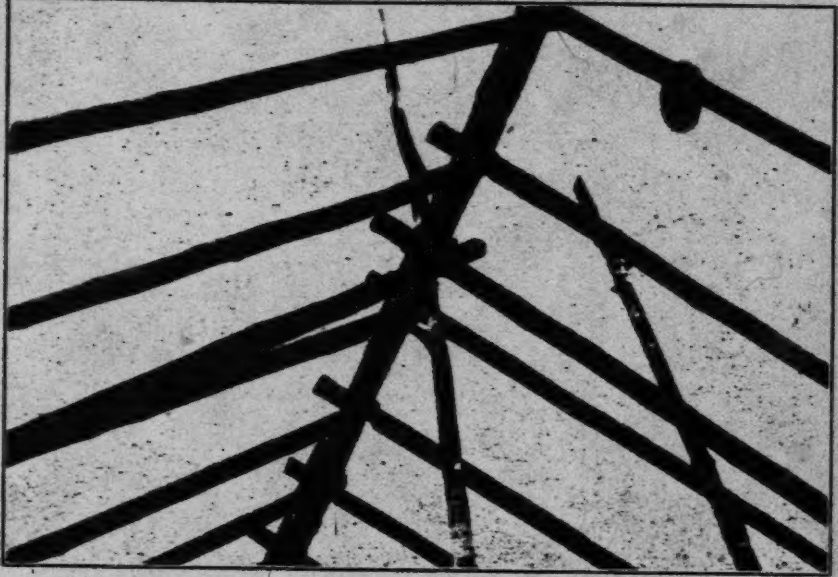
a, Frame of a six-pillar house.



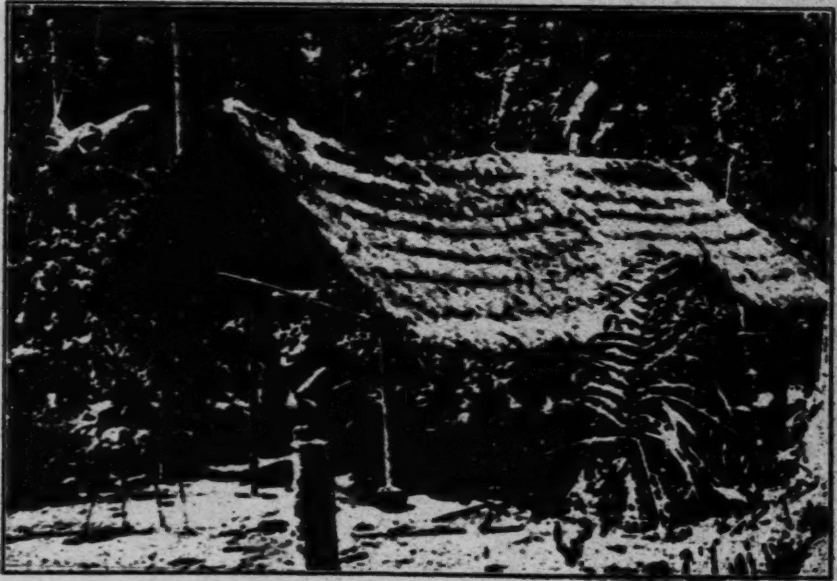
b, Frame of a six-pillar house.

[End plate 14]

342
335



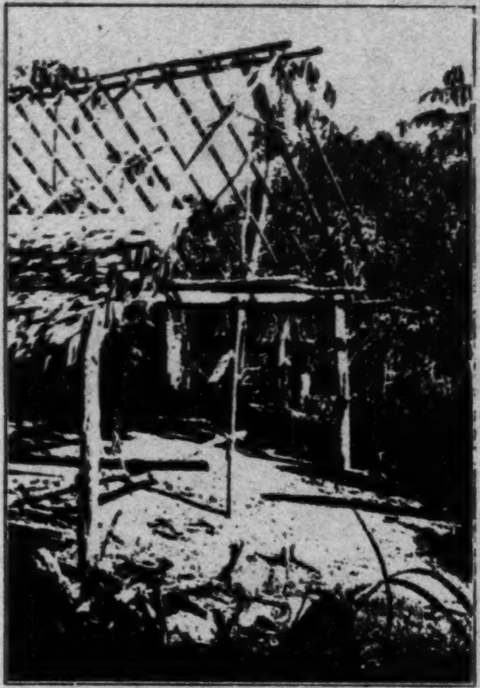
a, Details of house construction. Note notches in rafter ends to accommodate ridge-pole.



b, Typical Carib house, four-pillar construction.

[End plate 15]

[End plate 16]



a, House in process of roofing. Note scaffolding of poles near ground to support roofer. This house is built without supports for the ridge-pole.

b, Same as *a*.

342

a, Typical Carib house, six-pillar construction.

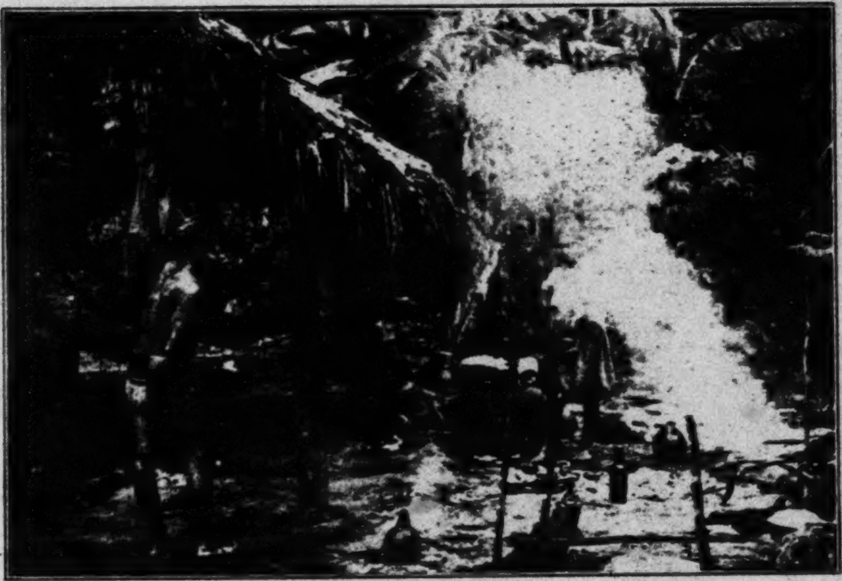
b, Side view of a large six-pillar house, belonging to the headman of Sawari.

[End plate 17]

352
322

a, Ordinary bench or stool made from one piece of wood and provided with four "feet."

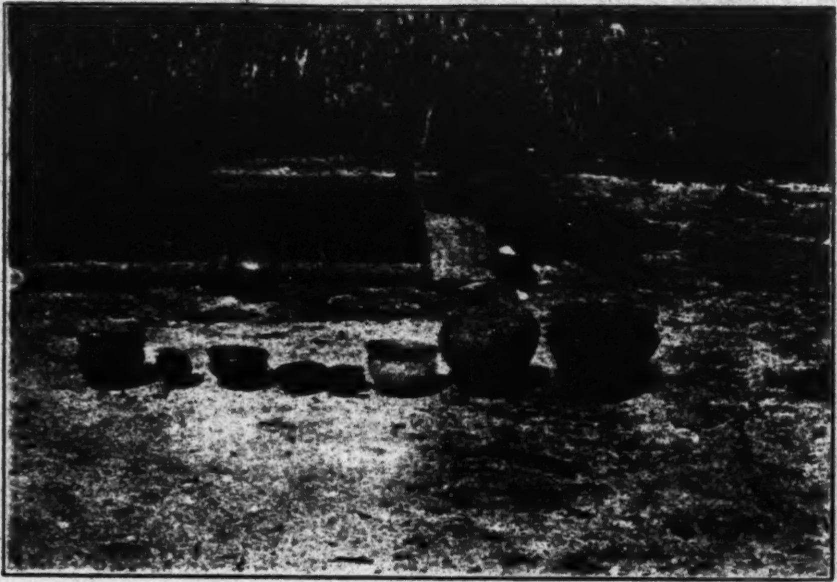
342
512



b, Early morning scene in a Carib household. Note tripodal drying rack over fire at right.

[End plate 18]

323
415



a, Types of pots. From left to right: tumai'ene; tuku'arimi; pyotomene; karupu; tumai'ene; tumai'ene; tukuwari; tuliwa.

415

b, Vessels made of calabashes.

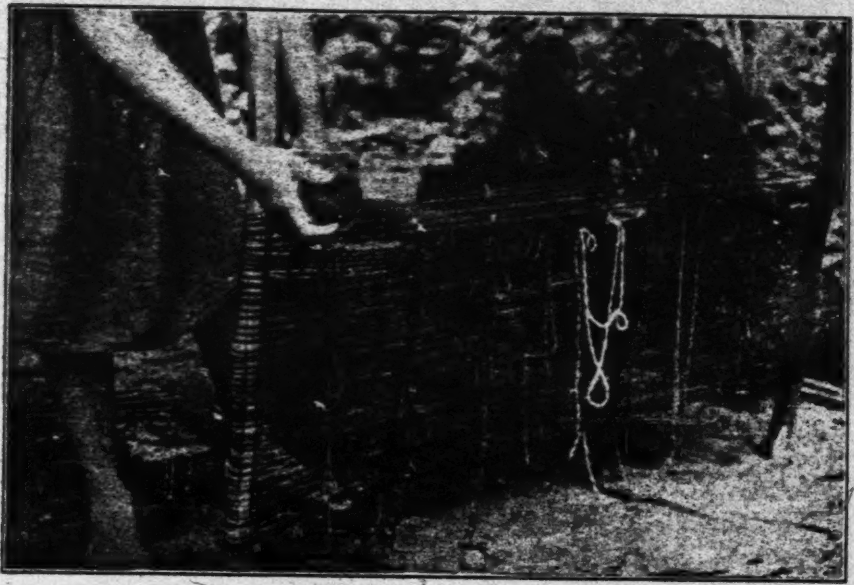
[End plate 19]

[End plate 20]

a, A typical collection of large pots. Note rags used to cover the mouths, also wicker binding on outside of certain specimens to facilitate carrying them.

b, Drink barrel used for fermenting casiri and other beverages.

286



a, Making a hammock. The loom consists of two upright sticks set in the ground, on which the warp is stretched as a continuous yarn unwound from a ball.

285

b, Weaving a sifter.

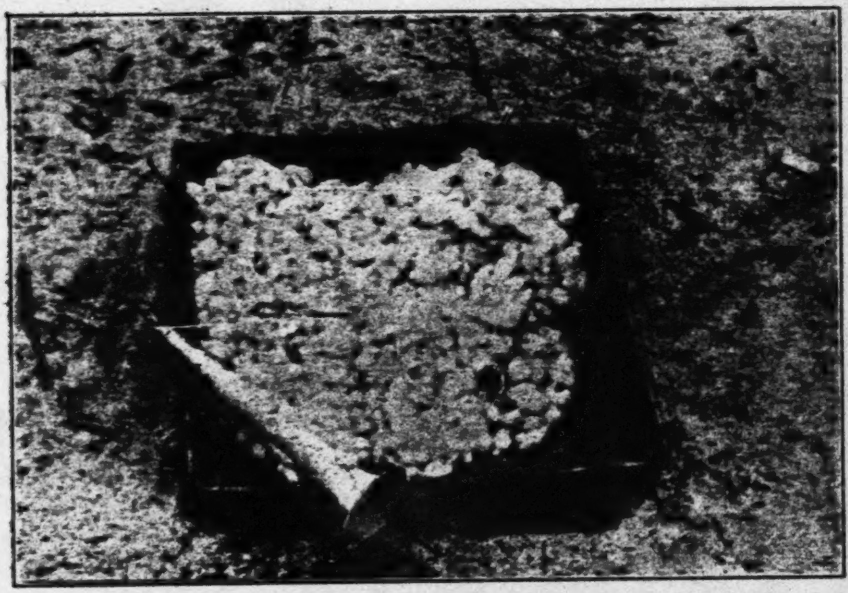
[End plate 21]

1: Gillin E-5 (1932-33)1936 SR9 Carib SR9

285
482

a, Carrying baskets.

283
415



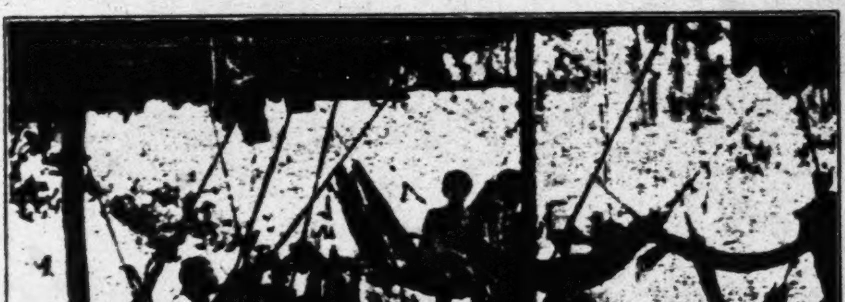
b, Spinning outfit consisting of basketry tray containing cotton bolls and spindle.

[End plate 22]

533
527

a, A typical scene during a drinking spree: a drummer sitting in his hammock while he continues to produce rhythms for the dance.

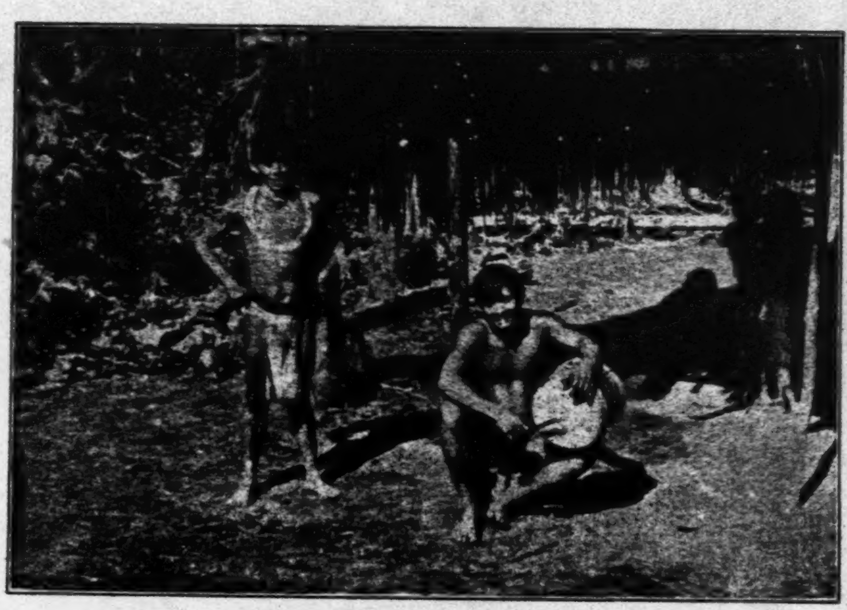
527



b, Guests at a drinking spree resting in their hammocks between dances in the house of the host.

[End plate 23]

291
534



a, Young men in typical costume. The man at the right is playing the sambura, or drum.

535

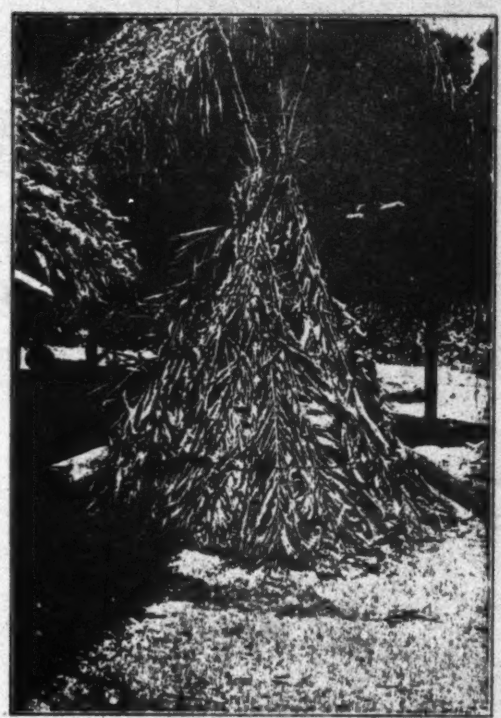
b, Beginning of one of the dances at Sawari. Women and girls start dances in a line facing the fiddle player with their arms around each other's shoulders.

[End plate 24]

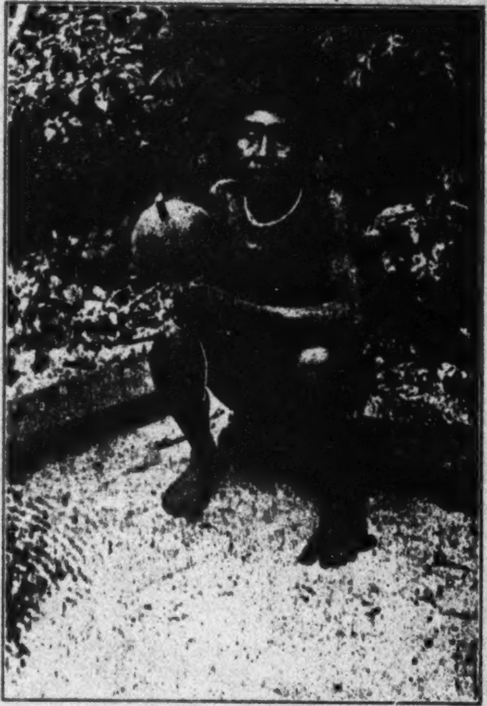
787
346

791

[End plate 25]



a, The consulting room (toakai), made of manicol leaves inside which the piaiyen consults his spirits upon those occasions when this is necessary.



b, David, the piaiyen of Sawari with his rattle containing the spirit-stones.

[End plate 26]

a, Following the trail along a fallen log. The photograph gives some idea of the thick underbrush and gloom of the deep forest.

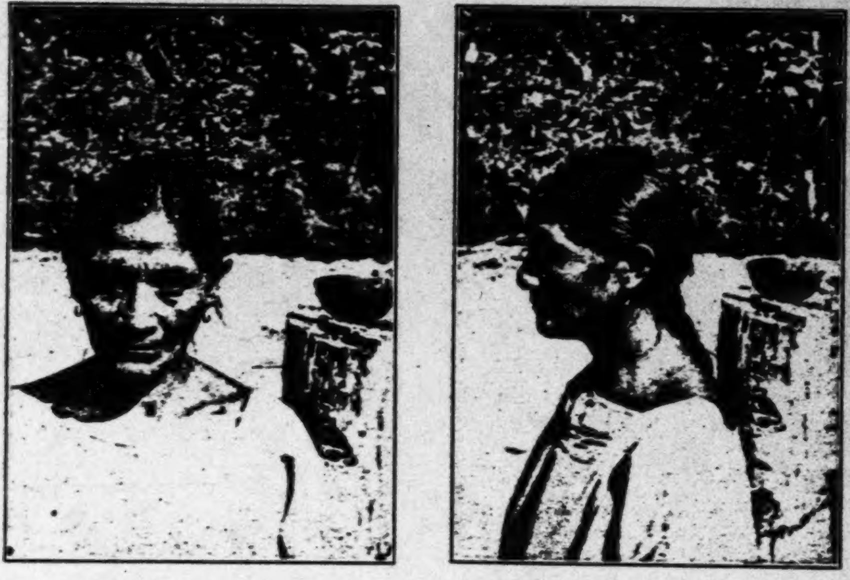
b, The Carib, Aleo William, playing a three-holed flute made from the tibia bone of a deer.

a and *b*, Indices: cephalic, 81; length-height, 60; facial, 95; upper facial, 51; nasal, 92.

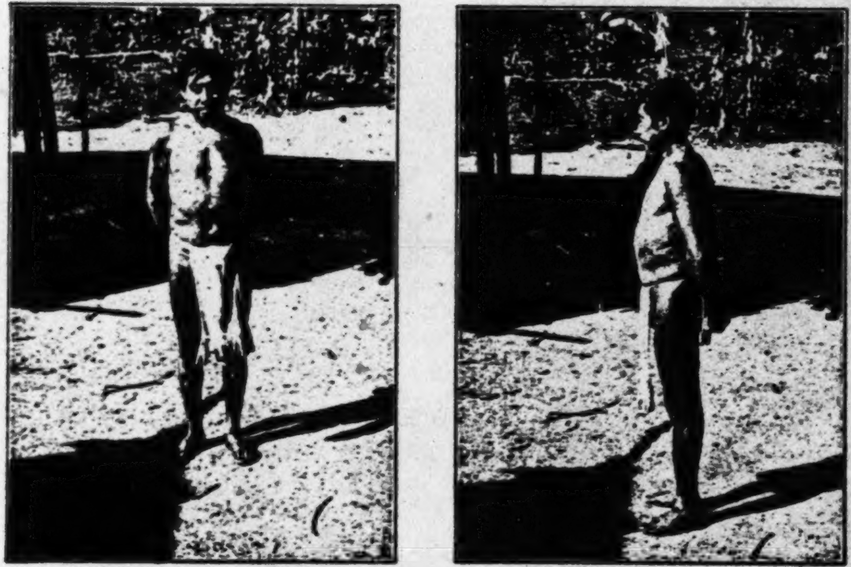
c and *d*, Indices: cephalic, 77; length-height, 59; facial, 92; upper facial, 47; nasal, 84.

PHYSICAL TYPES

[End plate 27]



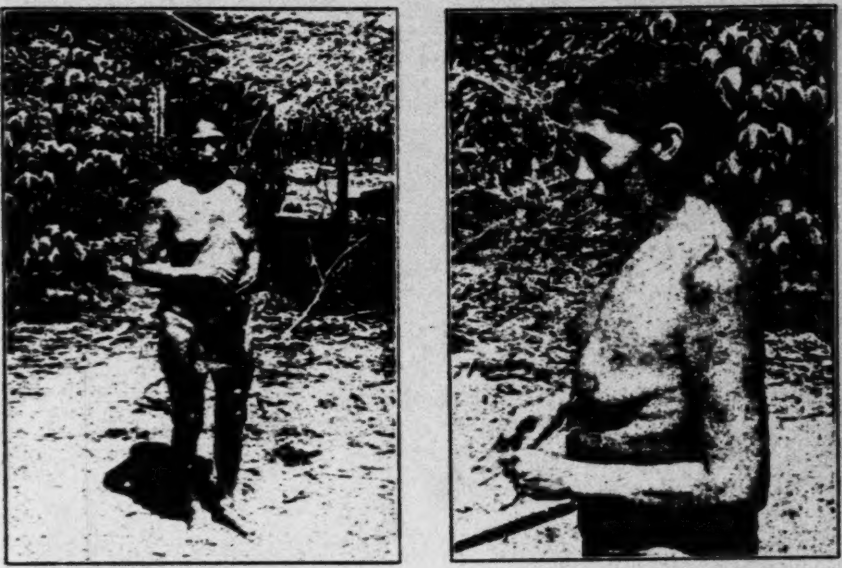
a and *b*, Indices: cephalic, 81; length-height, 65; facial, 86; upper facial, 52; nasal, 67.



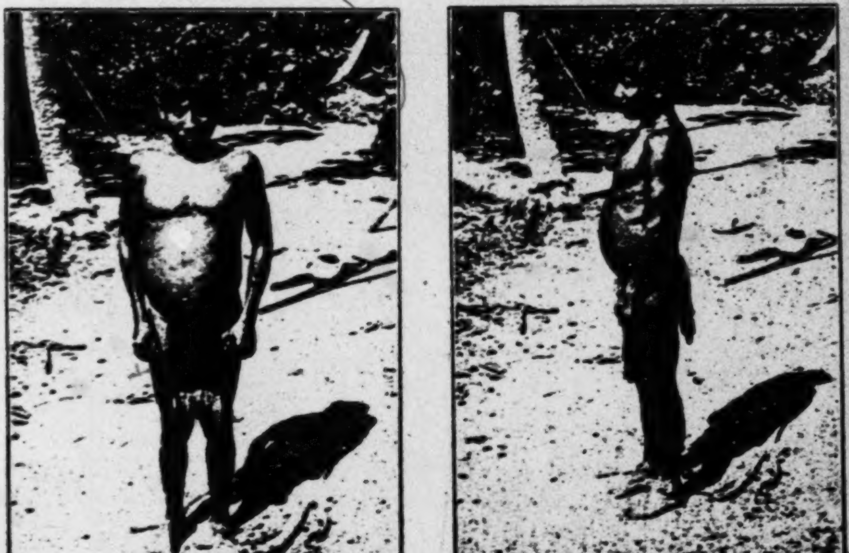
c and *d*, Indices: cephalic, 77; length-height, 62; facial, 84; upper facial, 42; nasal, 76.

PRINCIPAL TYPES

[End plate 28]



a and b, Indices: cephalic, 81; length-height, 64; facial, 88; upper facial, 48; nasal, 64.



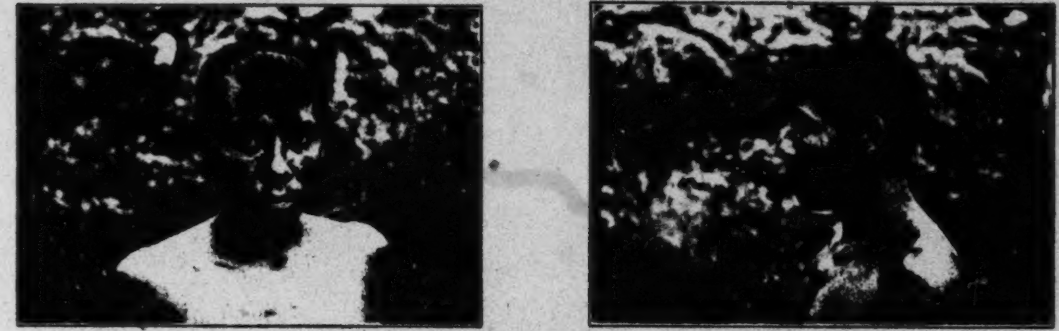
c and d. Indices not given.

PHYSICAL TYPES

[End plate 29]

142

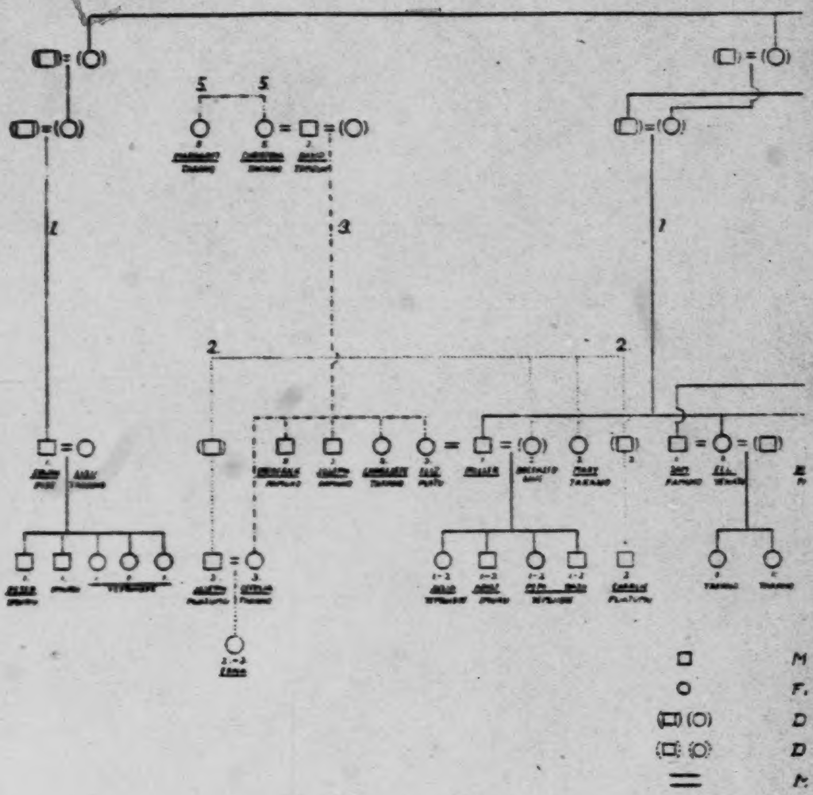
a, Indices: cephalic, 84; length-height, 70; facial, 91; upper facial, 49; nasal, 79.
b, Indices: cephalic, 82; length-height, 64; facial, 85; upper facial, 42; nasal, 73.



c and d, Indices: cephalic, 70; length-height, 68; facial, 89; upper facial, 47; nasal, 71.

PHYSICAL TYPES

[End plate 30]



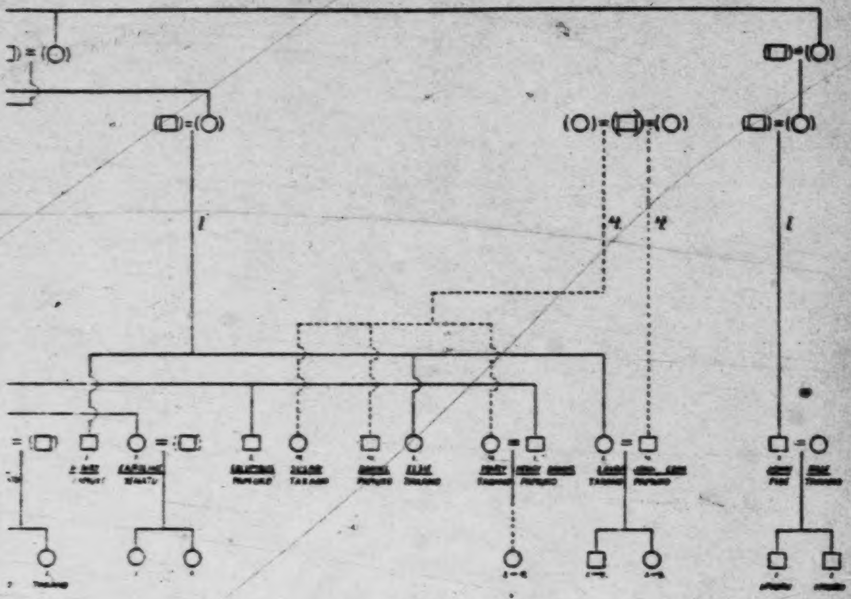
Figure

Diagram of blood relationship at Sawari settlement. Each living person ler's group: 2. Mary's group: 3. David's group: 4. John Cook's group; tinguished as follows: solid line. Miller's group; dotted line. Mary's gro dots and dash. Christina's group. Christian name of each individual is term used by Miller in referring to or addressing the individual.

[Figure 13 (1). following end plate 3]

1: Gillin E-5 (1932-33)1936 SR9 Carib SR9

621
601



MALE
FEMALE
DECEASED
DIVORCED
MARRIED

FIGURE 13

ng person labelled with number of his lineage or relationship group: 1, Mil-
's group; 5. Christina's group. Connecting lines showing relationship are dis-
ary's group; dots and dashes. David's group; dashes. John Cook's group; two
ividual is underlined. Directly under the Christian name is the relationship

[figure 13 (2), following end plate 30]